RESEARCH ARTICLES

EDITED BY
VINCENTA. SMITH

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IN

EPIGRAPHY, ARCHAEOLOGY AND NUMISMATICS OF INDIA

Edited by

VINCENT A. SMITH

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PREFACE

When dealing with so vast a subject as the history of India, it has been held necessary to divide it into chapters which relate not so much to separate periods of time as to the separate sources from which the materials are derived, and to entrust these chapters to different authors with special qualifications. Such important branches of historical investigation as epigraphy, numismatics, archaeology, and architecture are thus introduced into their proper place as preliminary to the chapters based upon written records, while the available evidence from both Sanskrit and vernacular literature has likewise been included. It must, however, be admitted that this method of treating the subject possesses certain inherent disadvantages. The matter of the several chapters cannot be marked off by rigid lines. For example, inscriptions comprise those on coins, and the origin of both building and sculpture is to be sought in prehistoric times. So again when the days of history proper have been reached. Periods that may conveniently be distinguished overlap one another in fact, while Northern and Southern India can hardly be brought within the same focus. It must also be borne in mind that large portions of the early history of India are still the field of conjecture and controversy, where scholars of equal eminence hold divergent views. Consequently, there may be found in the present volume some lack of logic in

arrangement, a certain amount of repetition, and possibly a few inconsistencies of statement. It has been thought better to admit such apparent defects than to attempt a strict uniformity, which would only produce results inadequate and misleading. In particular, the editor has not felt it his duty to demand that the contributors should all follow a conventional spelling of Indian names and words.

The names of the authors are appended to their several chapters, but it may be desirable to enumerate them here:—

Chapter I, 'Epigraphy,' has been written by Dr. J. F. Fleet, C.I.E., late I.C.S., and sometime Epigraphist to the Government of India; Chapters II, III, IV, and VII, 'Prehistoric Antiquities,' 'Archaeology of Historical Period,' 'Numismatics,' and 'Early History of Northern India,' by Mr. Vincent A. Smith, late I.C.S., author of *The Early History of India*; Chapter V, 'Architecture,' by Dr. James Burgess, C.I.E., formerly Director-General of the Archaeological Survey of India; Chapter VI, 'Sanskrit Literature,' by Dr. A. A. Macdonell, Boden Professor of Sanskrit at Oxford; Chapter VIII, 'Mediaeval History of Northern India,' by Mr. James Kennedy, late I.C.S.; Chapter IX, 'Hindu Period of Southern India,' by Mr. Robert Sewell, late I.C.S.

INTRODUCTORY NOTES

Notes on Transliteration

Vowel-Sounds

a has the sound of *a* in 'woman.'
ā has the sound of *a* in 'father.'
e has the vowel-sound in 'grey.'
i has the sound of *i* in 'pin.'
ī has the sound of *i* in 'police.'
o has the sound of *o* in 'bone.'
u has the sound of *u* in 'bull.'
ū has the sound of *u* in 'flute.'
ai has the vowel-sound in 'mine.'
au has the vowel-sound in 'house.'

It should be stated that no attempt has been made to distinguish between the long and short sounds of *e* and *o* in the Dravidian languages, which possess the vowel-sounds in 'bet' and 'hot' in addition to those given above. Nor has it been thought necessary to mark vowels as long in cases where mistakes in pronunciation were not likely to be made.

Consonants

Most Indian languages have different forms for a number of consonants, such as *d*, *t*, *r*, &c., marked in scientific works by the use of dots or italics. As the European ear distinguishes these with difficulty in ordinary pronunciation, it has been considered undesirable to embarrass the reader with them; and only two notes are required. In the first place, the Arabic *k*, a strong guttural, has been represented by *k* instead of *q*, which is often used. Secondly, it should be remarked that aspirated consonants are common; and, in particular, *dh* and *th* (except in Burma) never have the sound of *th* in 'this' or 'thin,' but should be pronounced as in 'woodhouse' and 'boathook.'

Burmese Words

Burmese and some of the languages on the frontier of China have the following special sounds:—

aw has the vowel-sound in 'law.'
ö and ü are pronounced as in German.
gy is pronounced almost like *j* in 'jewel.'
ky is pronounced almost like *ch* in 'church.'
th is pronounced in some cases as in 'this,' in some cases as in 'thin.'
w after a consonant has the force of *uw*. Thus, *ywa* and *pwe* are disyllables, pronounced as if written *yuwa* and *puwe*.

It should also be noted that, whereas in Indian words the accent or stress is distributed almost equally on each syllable, in Burmese there is a tendency to throw special stress on the last syllable.

General

The names of some places—e. g. Calcutta, Bombay, Lucknow, Cawnpore—have obtained a popular fixity of spelling, while special forms have been officially prescribed for others. Names of persons are often spelt and pronounced differently in different parts of India; but the variations have been made as few as possible by assimilating forms almost alike, especially where a particular spelling has been generally adopted in English books.

Notes on Money, Prices, Weights and Measures

As the currency of India is based upon the rupee, all statements with regard to money throughout the *Gazetteer* have necessarily been expressed in rupees, nor has it been found possible to add generally a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2*s*., or one-tenth of a £; and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000 = £100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1*s*. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise

the exchange value of the rupee to 1*s.* 4*d.*, and then introduce a gold standard (though not necessarily a gold currency) at the rate of Rs. 15 = £1. This policy has been completely successful. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1*s.* 4*d.*; and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000 = £100 − ⅓ = (about) £67.

Another matter in connexion with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A lakh is one hundred thousand (written out as 1,00,000), and a crore is one hundred lakhs or ten millions (written out as 1,00,00,000) Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899; while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both natives and Europeans. The anna was formerly reckoned as 1½*d.*; it may now be considered as exactly corresponding to 1*d.* The anna is again subdivided into 12 pies.

The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras and Bombay, may be thus expressed: one maund = 40 seers; one seer = 16 chittaks or 80 tolas. The actual weight of a seer varies greatly from District to District, and even from village to village; but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. This standard is used in official reports and throughout the *Gazetteer*.

For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change, what varies is not the amount of money to be paid for the

same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops, where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted--based upon the assumptions that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1*s*. 4*d*.: 1 seer per rupee = (about) 3 lb. for 2*s*.; 2 seers per rupee = (about) 6 lb. for 2*s*.; and so on.

The name of the unit for square measurement in India generally is the *bīgha*, which varies greatly in different parts of the country. But areas have always been expressed throughout the *Gazetteer* either in square miles or in acres.

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THE INDIAN EMPIRE

VOLUME II

HISTORICAL

CHAPTER I

EPIGRAPHY

I. Introductory Note

THE subject of this contribution to the Imperial Gazetteer is the explanation of the nature and value of the epigraphic or inscriptional bases of Indian research for the pre-Musalmān period. And the topic is an important one; for, not only is India particularly rich in inscriptional remains, but also those remains are the only sure grounds of historical results in every line of research connected with its ancient past. We have, however, to exclude from our treatment of this subject one branch which has always been found more generally attractive than any of the others. The inscriptions on coins and gems, better termed, by way of avoiding confusion, 'legends' on coins and gems, are epigraphic materials. But they are a special class of such materials; and the treatment of them falls, most properly, under the subdivision of numismatology. We have to confine our attention here to those epigraphic remains which have come to be best known as 'inscriptions' by way of distinction from the numismatic materials. Nevertheless, we hope to be able to show that our topic is no dry and dull one, but is full of interest as well as importance.

Introductory note.

The inscriptions, thus indicated as our topic, are notifications, very frequently of an official character, and generally more or less of a public nature, which recite facts, simple or complex, with or without dates, and were intended to be lasting records of the matters to which they refer. They are in almost all cases found engraved, not written. They were occasionally engraved

upon monuments in the shape of great monolithic columns; as, for instance, in the case of some of the moral and religious edicts of Aśōka, and the panegyric on the two columns of victory at Mandasōr, in Mālwā, which recites the conquests of king Yaśōdharman. Mostly, however, they are found engraved on metal plates, on stone tablets, on rocks, on walls and pillars and other parts of caves or of temples and other buildings, on pedestals of images and statues, and on relic-caskets. But they are occasionally found painted, and in a few instances written with ink. And some are found stamped on clay and bricks.

For the purposes that we have in view, the inscriptions include, with the exception of the legends on coins and gems, everything inscriptive, written, painted, stamped or engraved, public or private, lengthy or brief, that can be turned to account in connexion with the ancient past of India, in respect of the political history, the religious development, or any other line of research. Even the mere records of pilgrims' visits are of value, in establishing the antiquity of the sacred places visited by them, and of the towns from which they came. Even descriptive labels, incised as accompaniments to statues and sculptures, are valuable, in marking the ancient times to which traditions and legends and mythological notions may be carried back. Even a name stamped on a brick has been found of use, in determining the period to which a building may be referred. And even masons' marks, in the form of alphabetical characters, have played an important part in the inquiry into the history of writing in India.

Such are the remains with which we are to deal, and of which we shall speak either as 'inscriptions,' or as 'epigraphic records,' or simply as 'records,' according to the convenience of the moment. But we are to handle them to only a certain extent.

There are technical details connected with the inscriptions into the treatment of which we cannot, for various reasons, enter here. For the palaeographic branch of Indian epigraphic research, which explains the alphabets in which the inscriptions were written, and deals with the origin and development of those alphabets, we can here only refer to Professor Bühler's *Indische Palaeographie*, published in 1896. In respect of the languages used in the inscriptions, we can only say here that they include Sanskṛit, Pāli, some of the Prākṛits, the mixed dialect or dialects, and the older dialects of Kanarese, Marāṭhī, Malayāḷam, Tamiḷ, and Telugu; adding that, though in this detail some of the records offer problems which have still to be solved, they present no substantial initial difficulties to explorers

who will use, along with grammars and dictionaries, the more recently and critically edited treatments of the texts and translations. In respect of the diction, we can only observe that the inscriptions were composed sometimes entirely in prose, sometimes entirely in verse, and sometimes in prose and verse mixed. And, in respect of the eras in which so many of the inscriptions were dated, and of the methods according to which the precise dates were stated, we can only refer to certain special works and tables which will be mentioned farther on. Those are technical topics which cannot be handled here. Also, while a sufficient indication must be given of the various purposes to which the inscriptions can be applied, we shall not present here even a summary of the historical and other results obtained from them; those results form the topics of other contributions to this volume.

We have to deal here with the inscriptions from other points of view. We have to explain the nature of them. We have to illustrate the value of them, and show in a general way the ends to which they may be utilized, and establish the necessity for an exhaustive examination of them. And we have to indicate the nature of the work which still remains to be done on them, and to point out certain subsidiary lines of research which ought to be systematically followed up in connexion with them. In leading, as we hope to do, new workers into a field of exploration in which there is a vast amount of important work still to be done, especially in connexion with the more ancient periods, we have to make the way easy for them, by showing them how to avoid the mistakes of previous explorers, and how to direct their own inquiries to the greatest advantage.

II. The Value of the Inscriptions

The value of the inscriptions.

Rich as have been their bequests to us in other lines, the Hindūs have not transmitted to us any historical works which can be accepted as reliable for any early times. And it is almost entirely from a patient examination of the inscriptions, the start in which was made more than a century ago, that our knowledge of the ancient political history of India has been derived. But we are also ultimately dependent on the inscriptions in every other line of Indian research. Hardly any definite dates and identifications can be established except from them. And they regulate everything that we can learn from tradition, literature, coins, art, architecture, or any othe

source

While, however, the inscriptions contain the historical and other information which we seek, they were written, engraved, and published, not with the object of presenting that information, but for other purposes which will be made apparent further on; and as a rule it is only incidentally, and as a purely secondary consideration, that they record the details which are so valuable to us. The collection of those details, therefore, is a matter that requires time and patience. The general value of the inscriptions lies mostly in the way in which they all work in, one with another. It follows that our results are, for the most part, obtained only by an examination and combination of large numbers of the epigraphic records; as, for instance, in the process which enabled Professor Kielhorn (see IA, 20. 404 ff.[1]) to dispel the influence of a myth, the Vikrama-legend, which had long dominated certain theories about the history of Sanskrit literature and other matters, by showing that the so-called Vikrama era, beginning in 58 B.C., was neither established by, nor designedly invented in memory of, any king Vikramāditya who actually flourished at that time[2]. It is not always

[1] For the explanation of the abbreviations used in this chapter, see the list on page 87 f. below.

[2] The legend belongs specially to the Jains. As regards this part of it, Professor Kielhorn has shown that the era of 58 B.C. was known in A.D. 473 and 532–33 as 'the reckoning of the Mālavas,' and in A.D. 879 as 'the Mālava time or era,' and that records of A.D. 738 and 1169 speak of it as 'the years of the Mālava lord or lords.' He has shown that the word *vikrama* is first found coupled with it in a record of A.D. 842 which speaks of 'the time called *vikrama*,' and that we hear for the first time of a prince or king named Vikrama, in connexion with the era, in a poem composed in A.D. 993, the author of which gives its date by saying that he was writing one thousand and fifty years 'after king Vikrama had ascended to the pure dwelling of the immortals.' And he has shown that the first specific mention of the era as having been established by Vikramāditya is in a record of A.D. 1198. He has pointed out that these facts 'would seem to indicate that the connexion of Vikrama with the era grew up gradually, or was an innovation which took centuries to become generally adopted.' And he has put forward the very reasonable opinion that the word *vikrama*, from which the idea of the king Vikrama or Vikramāditya was evolved, most probably came to be connected with the era by the poets, because the years of the reckoning originally began in the autumn, and the autumn was the season for commencing campaigns, and was, in short, the *vikrama-kāla* or 'war-time.'

On the general question, reference may be made to a note by the present writer, in IA, 1901, 3 f. All the results of epigraphic research emphatically [illegible] Professor Kielhorn's conclusions, and point, as far as we can see at present, to the period between A.D. 842 and 993 as the time during which

that a single inscription, taken by itself, will establish anything of special importance; and we must, at any rate, not make a start in epigraphy with the expectation of achieving a great discovery in the first new record that we examine. It is not every day that we are able to obtain a Rummindēī inscription (EI, 5. 4) which locates at once the birthplace of a Buddha; or a Mandasōr inscription (F.GI, 79, and see introd., 65 ff.) which settles at once the long-disputed question of the epoch of an Indian era, that of the great Gupta kings; or a Takht-i-Bahaī inscription which (see JRAS, 1905. 223 ff.; 1906. 706 ff.) furnishes corroborative evidence of a Christian tradition about an apostle and an Indian king, St. Thomas and Gondophernēs[1].

A. The Absence of Ancient Historical Compilations in India

It has been said above, that the Hindūs have not bequeathed to us any historical work which can be accepted as reliable for any early times. It is, indeed, very questionable whether the ancient Hindūs ever possessed the true historical sense, in the shape of the faculty of putting together genuine history on broad and critical lines. As we shall see, they could write

The absence of ancient historical compilations in India.

the first crude rudiments of the full legend were evolved, or at least were brought into something like a substantial story.

It has further now become clear that that part of the legend which connects certain alien foes with Vikramāditya is ultimately based upon nothing but a confusion (see JRAS, 1905. 643 ff.; 1906. 161, 176) between Saka, Śaka, as the name of a foreign people, and the epigraphic forms Saka, Śaka, = Sakka, Śakka, Sakya, Śakya, Śākya, a 'Buddhist.' That part of it rests, not upon wars between an Indian king and foreign invaders of his country, but upon the rivalry, with varying success, during the first centuries before and after the Christian era, between the Buddhists and the Jains.

The reckoning of 58 B.C. was founded by Kanishka, in the sense that the opening years of it were the years of his reign; it was set going as an era by his successor, who, instead of breaking the reckoning, so started, by introducing another according to his own regnal years, continued it; and it was accepted and perpetuated as an era by the Mālava people, and so was transmitted to posterity by them: see JRAS, 1905. 233; 1906. 979; 1907. 169.

[1] In connexion with this matter it may be added that, whereas the Syriac version of the Acts of St. Thomas mentions a certain Gad as a brother of king Gūdnaphar, Gondophernēs (IA, 1904. 4), there has recently been obtained, from the territory to which the Takht-i-Bahaī inscription belongs, an intaglio (see the *Annual Report of the Archaeological Survey of India* for 1902-3. 167) which bears the Kharōshṭhī legend *Gadasa*, 'of Gada (Gad).' It would be rash to jump to the conclusion that we have here a souvenir of Gad himself, brother of Gondophernēs. But we have evidence, in this new discovery, that the name Gad is at least not purely legendary.

short historical compositions, concise and to the point, but limited in extent. But no evidence of the possession by them of the faculty of dealing with history on general lines has survived to us in the shape of any genuine historical work, deliberately written by them as such, and also accurate and reliable.

The experience of the Arabian writer Albērūnī, in the eleventh century, was, that 'the Hindūs do not pay much attention to the historical order of things, they are very careless in relating the chronological succession of their kings, and when they are pressed for information and are at a loss, not knowing what to say, they invariably take to tale-telling.'[1] And certainly, such attempts as have been made by the Hindūs of more recent times do not display any capabilities from which we might infer that their early ancestors possessed the faculty, even if they did not exercise it.

Early in the last century, there was put together—apparently quite spontaneously, and not in consequence of any lead given by western inquiries—a Kanarese compilation entitled Rājāvalikathe, or 'the story of the succession of kings,' which purports to trace the history of Jainism, especially in connexion with the province of Mysore, on the political history of which, also, it pretends to throw light, from the earliest possible times: the published extracts from this work[2], however, show that it is simply an imaginative production, of the most fanciful kind, based on the wildest legends, to which no value of any sort can be attached for early historical purposes[3]. At apparently some earlier time, as yet not fixed, there was drawn up, in the same part of the country, a Tamil chronicle entitled Koṅgudēśarājākkaḷ[4], or 'the kings of the Koṅgu country,' which purports to give a connected historical account of Mysore from the first century A.D.: but in this case, again, the fanciful nature of the work, and its utter want of reliability for any purposes of early

[1] Sachau's translation of Albērūnī's India, 2. 10.

[2] See EC, 2, Inscriptions at Śravaṇa-Beḷgoḷa, introd. 3 ff., 8 ff., 25 f., 61.

[3] For one illustration of this, see IA, 21. 157; and regarding the apocryphal character of one of the earlier works on which it may be based, the Bhadrabāhucharita, see EI, 4. 23, note 1.

[4] There is an abstract of the contents of this work, by Dowson, in JRAS, 1846. 1 ff.; and a translation, by Taylor, in the Madras *Journal of Literature and Science*, 14, 1847. 1 ff. Burnell condemned the work in his *South-Indian Palaeography*, 1874. 26, note 1; 1878. 33, note 1.

Regarding the 'Chronicle of Toragal,' another document of the same class, but on a smaller scale, produced by the astrologers of Beḷgaum and Manōḷi, see IA, 30, 1901. 201, note 3.

history, are disclosed at once by the very slightest thoughtful examination in the light of present knowledge: for instance, at the outset, not only does it give, as real facts, the fictitious pedigree and history with which we are familiar from the spurious copperplate records of the Western Gaṅga series, but also (see EI, 3. 170), before the first of the fictitious Gaṅga kings, it places in the period A.D. 82 to 178, and before that time, some of the Rāshṭrakūṭa kings whose dates really lay between A.D. 675 and 956. Notices of other chronicles, relating, for instance, to the Chōḷa, Pallava, and Pāṇḍya territories and to the Teliṅgāna country, are to be found in Professor H. H. Wilson's *Descriptive Catalogue of the Mackenzie Collection*. These have, perhaps, not yet been criticized in detail. But a perusal of the notices discloses features very similar to those of the Rājāvalikathe and the Koṅgudēśa-rājākkaḷ. And, though they may be of some use in the geographical line of inquiry, we have no prima-facie reason to expect to find in these works, also, anything of the slightest historical value for early days.

B. Pedigrees and Successions

Yet there were once, undoubtedly, genuine materials in abundance, from which histories of the most valuable kind might have been compiled in ancient times. **Pedigrees and successions.**

In the first place, we, who have lived in India, know how, in that country, pedigrees are always forthcoming, even in the present day, to an extent that is unknown in western lands. Among families connected in any way hereditarily with the administration, even the Gauḍas or Pāṭīls (the village headmen) and the Kuḷkarṇīs (the accountants) can always bring forward, whenever there is any inquiry into their *watans* or rights and privileges, or any dispute among themselves, genealogical tables, unquestionably not altogether unauthentic, which exhibit the most complicated ramifications of their houses, and often go back for two or three centuries; and even the death of an ordinary cultivator usually results in the production of a similar table, though of more limited scope, in the inquiry that is held to determine his heirs. Every *maṭha* or religious college of any importance preserves the succession of its heads. And among the Jains we have the Paṭṭāvalis or successions of pontiffs, for a full and lucid notice of some of which we are indebted to Dr. Hoernle (IA, 20. 341; 21. 57)[1]. They purport to run

[1] For others, see Klatt in IA, 11. 245, 251; Peterson's *Second Report on*

back to even the death of the last Tīrthaṁkara Vardhamāna-Mahāvīra in (let us say) 527 B.C.; and, though the earlier portions of them were probably put together in their present form not before the ninth century A.D. (because they exhibit the Vikrama-legend; see page 4 above, and note 2) and with results that are capable of considerable adjustment, they are, no doubt, based upon more ancient and correct lists that were then extant.

The preservation of pedigrees and successions has evidently been a national characteristic for many centuries. And we cannot doubt that considerable attention was paid to the matter in connexion with the royal families, and that Vaṁśāvalis or Rājāvalis, lists of the lineal successions of kings, were compiled and kept from very early times. In fact, the matter is not one of speculation, but is capable of proof. We distinctly recognize the use of such Vaṁśāvalis, giving the relationships and successions of kings, but no chronological details beyond the record of the total duration of each reign, with occasionally a coronation-date recorded in an era, in the copperplate records. We trace them, for instance, in the introductory passages of the grants of the Eastern Chalukya series (see, e.g., IA, 14. 55; H.SII, 1. 36; EI, 5. 131; 7. 177), which, from the period A.D. 918 to 925 onwards, name the successive kings, beginning with the founder of the line who reigned three centuries before that time, but do not put forward more than the length of the reign of each of them; and, from certain differences in the figures for some of the reigns, we recognize that there were varying recensions of those Vaṁśāvalis. And we trace the use of Vaṁśāvalis again in the similar records of the Eastern Gaṅgas of Kaliṅga, which, from A.D. 1058 onwards (see EI, 4. 183), give the same details about the kings of that line with effect from about A.D. 890, and one of which, issued in A.D. 1296 (JASB, 65, 1896. 229), includes a coronation-date of A.D. 1141 or 1142.

There is other proof also[1]. There has been brought to light from Nēpāl a long Vaṁśāvali (IA, 13. 411), which purports to give an unbroken list of the rulers of that country, with

Sanskṛit MSS., 89, 163; and Bhandarkar's *Report on Sanskṛit MSS.* for 1883–84. 14, 319.

[1] Kalhaṇa, writing the Rājataraṁgiṇī in A.D. 1148–49, mentions lists of kings of Kashmīr which had been put together by Kshēmēndra and Hēlārāja (compare page 16 below). But we do not quote these as proof of our present point; because they were compilations, not original lists prepared under the dynasties to which they referred.

the lengths of their reigns and an occasional landmark in the shape of the date of an accession stated in an era, back from A.D. 1768 to even so fabulous an antiquity as six or seven centuries before the commencement of the Kali age in 3102 B.C. It contains gross mistakes in chronology: for instance, it places in 101 to 34 B.C. Aṁśuvarman, of the Ṭhākurī dynasty, who, we know, was ruling in A.D. 635 and 649 or 650 (F.GI, introd., 189); and, partly through committing one of the usual leading faults of Hindū compilations, namely, of treating contemporaneous dynasties as successive dynasties, it places about the end of the seventh century B.C. a certain Vṛishadēva, of the Sūryavaṁśi or Lichchhavi dynasty, who, we know, was a contemporary of Aṁśuvarman. And, as was pointed out by Pandit Bhagwanlal Indraji, who brought the full Vaṁśāvali to notice critically, 'it possesses no value whatever as a whole,' and 'no single one of its several portions is free from the most serious errors,' and it is useless for reconstructing the earlier history of Nēpāl, even by adjustment with respect to any names and dates that are known from other sources. But, in connexion with the above-mentioned Vṛishadēva, and in spite of the error in respect of his date, it teaches one thing which is of use. From him, whom it places No. 18 in the Sūryavaṁśi dynasty, to Vasantadēva, No. 23, it gives correctly a list of six successive names, which we have verified from epigraphic records. It allots to each of these rulers, it is true, a length of reign which not only is impossible in itself, but also is disproved in one case at least by the inscriptions. But the fact remains, that the names are given correctly and in the right order. This short list was certainly not based on some ancient charter read by the original compiler of this portion of the Vaṁśāvali. What would have happened, if that had been the case, is suggested plainly enough by the Konnūr inscription from the Dhārwār District (EI, 6. 25), which purports to be the reproduction of a charter, dated A.D. 860, of the time of the Rāshṭrakūṭa king Amōghavarsha I. Here, we have a record on stone, which says that it was embodied in that shape in accordance with a copperplate charter that was read and explained by a certain Jain teacher named Vīranandin, son of Mēghachandra. Partly from the characters of the record, and partly from the established fact that Mēghachandra died A.D. 1115, we know that this record was not put on the stone before the twelfth century A.D. We do not dispute the alleged fact that Vīranandin drafted the stone record from some ancient charter on copper. But we find either that he could not read that charter

correctly, or that he did not take the trouble to interpret it aright; for, not only has he misstated the relationships of some of the Rāshṭrakūṭa kings whom the stone version does mention, and omitted others whom it ought to have included, but also—probably from a wrong interpretation of some verse which we have not as yet found in a genuine record—he has placed at the head of the Rāshṭrakūṭa genealogy a purely fictitious person, whom he has called Prichchhakarāja. If the list from Vṛishadēva to Vasantadēva in the Nēpāl Vaṁśāvali had been put together in the same way from some ancient deed, the compiler of that part of the document would undoubtedly have committed some similar mistakes. We have no hesitation in saying that he took these six names from some genuine early Vaṁśāvali, accessible to him, which had survived from the time of the rulers to whom it referred; and probably the duration of the reigns was given correctly by him, and was falsified subsequently by some later compiler to fit his own scheme of the whole chronology.

The Bower Manuscript has proved to us that, under favourable conditions, a document written on even so frail a material as birch-bark can survive for fourteen centuries. This manuscript was obtained in Kashgaria, on the north of Kashmīr, through excavations at 'the foot of one of the curious old erections, of which several are to be found in the Kuchar district.' It was secured and brought to notice by Lieutenant Bower (see JASB, 59, 1890. proceedings, 221), from whom it derives its name. And Dr. Hoernle has shown (IA, 21. 37), by a comparison of its characters with those of epigraphic records, that in it we have a veritable original document, which is a relic that has come down to us from the period A.D. 400 to 450. With this instance before us, we may not unreasonably hope that an exploration of some buried city, or even of one or other of the numerous private collections of ancient manuscripts that still remain to be examined, may some day result in the discovery of some of the early and authentic Vaṁśāvalis.

Meanwhile, we have to be very cautious in accepting what we do obtain in this line. We have before us the example, not only of the Nēpāl Vaṁśāvali, but also of some Vaṁśāvalis from Orissa, which do not indeed pretend to quite such fabulous antiquity, but which nevertheless purport to present an unbroken list of the kings of that province back from A.D. 1871 to the commencement of the Kali age in 3102 B.C., with the length of the reign of each, and with certain specified dates as epochs.

And the results put forward by them, and by the palm-leaf archives of the temple of Jagannātha at Purī, have been supposed to give at any rate certain definite and reliable landmarks in the early history. But an examination of them and of the archives (see EI, 3. 334 ff.) has shown that, for at least the period anterior to about A.D. 1100, they are utterly fanciful and misleading, and that they were devised, chiefly from imagination, simply to magnify the antiquity and importance of the temple of Jagannātha and of all its surroundings and connexions. These local annals are not correct even in respect of so radical a point as the building of that temple. They attribute it to a king Anaṅgabhīma, whom they would place A.D. 1175 to 1202; whereas we know from the epigraphic records that it was built by a predecessor of his, Anantavarma-Chōḍagaṅga-Gaṅgēśvara, in the period A.D. 1075 to 1141 or 1142. Further, they actually divide this latter king into two persons, Chōḍagaṅga and Gaṅgēśvara, to whom they would allot the periods A.D. 1132 to 1152 and 1152 to 1166. For the period anterior to him, they do not incorporate any ancient and authentic lists of rulers, but simply bring forward, amongst a host of fabulous names, a few historic kings, some of them not even connected with Orissa at all, whose dates they grossly misplace. Thus these records, again, are absolutely worthless for any purposes of ancient history.

C. Official Records

In the genuine early Vaṁśāvalis, materials must long have been extant, which could have been turned to most valuable account, if only for the bare outlines of political history. But there were plainly more ample materials than these. Of course, the elaborate routine of modern times had not been devised. Still, with the great advance towards civilization which the Hindūs had made even in the fourth century B.C., and with the careful and detailed system of administration which is disclosed by the inscriptional remains, there must have been, from early times, a fairly extensive system of official records. In any such state of advancement there are certain precautions and arrangements, indicated by common sense, which would inevitably be adopted. Copies of important orders issued must be kept on record in the issuing office, as a reminder to make sure that instructions given are duly and fully carried out; and orders received must be filed in the receiving office, to be produced in justification of any particular measures taken in giving effect to them. The specific terms of treaties and alliances must be reduced to writing; and copies must be kept

Official records.

for reference by each of the contracting parties. Diaries of some kind must be kept by local governors, from which to prepare from time to time the periodical reports on their administration. A record must be kept, on both sides, of tribute paid by the great feudatory nobles and received by the paramount sovereign. And, even under a system of farming the revenues, accounts of some kind must be framed, of the proceeds of provincial customs and taxes and of village revenues, and of the expenditure incurred on the collection of them.

Notes of all such matters must have been preserved in some form or another, in all the various offices. But it is probable that they were kept in the shape of general day-books, something like the Diaries of the Pēshwās of the eighteenth century[1], dealing with all matters mixed, rather than according to any system of separate ledgers and files for each branch of business. Except on the hypothesis of such a system of day-books, it is difficult to account for the manner in which, for instance, the date of a record of A.D. 1008 at Tanjore (H.SII, 3. 14) cites the 124th and 143rd days of the twenty-fourth year of the Chōḷa king Rājarāja I, and the date of a record of A.D. 1113 at Tiruvārūr in the Tanjore district (EI, 4. 73) cites the 340th day of the fifth year of the reign of his descendant Vikrama-Chōḷadēva; for such details to be cited conveniently there must have been available some such books, in which the days were entered and numbered, and the events of them were posted up, as they ran[2].

D. Dynastic Archives and Chronicles

Dynastic archives and chronicles.

In such day-books and other records, valuable items of historical information would abound. The compilation, however, of any general history from them would, no doubt, be

[1] For an indication of the nature of these Diaries, reference may be made to the extracts relating to political matters from the Rōjniśī or Journal of the Mahārāja Śāhu of Sātārā from A.D. 1713–14 to 1734-35, published at Poona in or about 1900. Some of the Pēshwās' Diaries themselves have, it is believed, been published since then.

[2] A rather curious instance of citing the days is furnished by the Tiruppūvanam grant of the Pāṇḍya king Jaṭāvarma-Kulaśēkhara (IA, 20. 288), which mentions the 4,360th day of his thirteenth year. We can hardly imagine that the numbering of the days had run on from the first day of the reign up to that high number. And we understand that, as suggested (loc. cit., 289), the writer took the fortieth day of the thirteenth year, and, for some reason or other, added it to $360 \times 12 = 4{,}320$ as the total number of the days of the preceding twelve years.

a somewhat complicated and laborious matter. But there were, plainly, other materials of a more concise kind, that might have been used with great facility, in the shape of dynastic archives and chronicles, which, in some cases at least, survived for a considerable time after the disappearance of the dynasties to which they belonged, and from which comprehensive and very valuable accounts might easily have been put together.

It can only have been from ancient archives, of considerable fullness of detail, which had fallen into their own hands, that the Western Chālukya kings of Kalyāṇi (A.D. 973 to 1189) derived the knowledge that they possessed, and exhibited in some of their records, of the earlier Chalukya dynasty of Bādāmi (about A.D. 550 to 757)—separated from themselves by an interval of more than two centuries, during which an extraneous dynasty possessed the sovereignty—from which they claimed to be descended. This is pointedly illustrated by the mention, in the Kauṭhēṁ plates of A.D. 1009 (IA, 16. 15), of Maṅgalēśa, who was not in the direct line of descent, and therefore might easily have been lost sight of in a mere Vaṁśāvali, and by the preservation, in the same record, among certain other details for which tradition alone, or a mere list of kings, would not account, of the memory of the conquest by him of the territory of Rēvatidvīpa, and by the way in which the record seeks to obliterate his attempt to break the direct and rightful senior line of succession in favour of transmitting the crown to his own son, by representing him as simply a regent during the minority of his nephew Pulakēśin II, to whom, it says, he eventually restored the throne in pious accordance with the custom and laws of the Chalukya kings. And the Śilāhāra princes of the Southern Koṅkaṇ must have kept a careful record of their paramount sovereigns, the Rāshṭrakūṭas (A.D. 754 to 973), as well as of themselves, to account for the statement about the rise of their own family under Kṛishṇa I. in the period between A.D. 878 and 912, and for the full account of the Rāshṭrakūṭa genealogy, as well as of their own pedigree, that is given in the Khārēpāṭaṇ plates of A.D. 1008 (EI, 3. 293), issued by the Śilāhāra Raṭṭarāja in the time of the Western Chālukya king Iṛivabeḍaṅga-Satyāśraya.

These cases indicate distinctly the compilation and survival of dynastic chronicles, which were doubtless carried on chapter by chapter after the death of each successive king or prince. And we can actually recognize the copy of a chapter, or of

the draft of the beginning of a chapter, of such a chronicle, compiled most probably from day-books or other such sources, in the Hāthigumphā cave-inscription, of 156–55 B.C. if it is really dated in the 165th year of the time of the Maurya kings (C.IA, plate 17; Sixth Oriental Congress, 3. 135), which gives a succinct account of the career of king Khāravēla of Kaliṅga from his birth to the thirteenth year of his reign: it tells us that he spent fifteen years in princely sports; that for nine years he enjoyed power as Yuvarāja or heir-apparent and appointed successor; and that he was crowned to the succession at the end of his twenty-fourth year; and then it briefly enumerates, year by year, the principal events of his reign, and certain large items of expenditure on public works and charity, as far as the thirteenth year. In this department, again, we may hope that future explorations will result in discoveries of a particularly interesting kind.

E. The Purāṇas

The Purāṇas.

Those materials did not remain altogether unutilized. We can trace a use of at least Vaṁśāvalis in the historical chapters given in some of the Purāṇas, which do certainly indicate a desire on the part of the ancient Hindūs not to ignore general history altogether, and are clearly based upon ancient archives which had survived in a more or less complete shape and were somehow or other accessible to the composers of those works, or upon some prototype which had been so based.

At the same time it is not very much, in the way of reliable history, that we gather from these chapters in the Purāṇas. In the first place, some of the necessary materials were apparently not available to the authors, and some of the dynasties are omitted altogether. For instance, the Purāṇas do not include (at any rate with any clearness) any references to the line established in Northern India by Kanishka, who, in doing that, founded the so-called Vikrama era commencing in 58 B.C. (see page 4 above, and note 2), or to the line established in Western India by that king of Kāṭhiāwār and Ujjain, apparently of Pahlava, Parthian, extraction, who thereby founded the so-called Śaka era of A.D. 78. They mention the great dynasty of the Guptas (A.D. 320 to about 530) in merely a vague manner, without individual names, as kings reigning over Sākēta and the Magadha country and along the Ganges as far as Prayāga (Allahābād)—a description which can only apply to the actual rise of the Gupta power under Chandragupta I. (A.D. 320 to about 335). And with this statement

about the Guptas—whom (by the way) they would place more than three centuries ahead of the present day—they close their treatment of the dynasties: no later history is found in them. In the second place, the authors did not think it worth their while to give us any fixed points, in the shape of dates recorded in any of the Hindū eras, to which we might refer their statements. Thirdly, they are by no means in exact agreement with each other in respect of the details which they give regarding the lengths of individual reigns or even the duration of each dynasty. In the fourth place, even allowing for corruption by successive copyists, it seems plain that—be the cause what it may; sometimes, perhaps, inability to decipher ancient characters—they have not always given us even the names of their kings with accuracy: compare, for instance, the Purāṇic lists of the Andhrabhṛityas with each other, and still more with such information about those kings as we have obtained from the epigraphic records. Finally, the chronological results of these chapters show that here, again, the authors committed the fault of treating contemporaneous dynasties as successive: thus (to take only a part of the whole list), from the beginning of the Mauryas to the end of the Kailakila-Yavanas the Purāṇas give us a total period of more than 2,500 years; apply this to 320 B.C. as the initial year of the first Maurya king Chandragupta (see JRAS, 1906. 984 f.), and we have the end of the Kailakila-Yavanas about A.D. 2200, some three centuries in the future from even the present time; and we have to place after that a variety of other rulers, including the Guptas (A.D. 320 to about 530), who, the same works say, followed the Kailakila-Yavanas.

In short, in the historical chapters of the Purāṇas the treatment of their subject is sketchy and meagre, and the details are discrepant. We may utilize these chapters to a certain extent for general purposes, if we discriminate so as to place synchronously in different territories some of the dynasties which they exhibit as ruling successively over the same dominions. But we cannot apply them more precisely without appreciably more corroboration than has as yet been obtained from epigraphic and numismatic sources.

F. The Rājataraṁgiṇī

The only other indication, that has survived from any antiquity, of an attempt on the part of the Hindūs to put together anything in the shape of a general history, is the Rājataraṁgiṇī, The Rājataraṁgiṇī.

on the first eight cantos of which Kalhaṇa was engaged in A.D. 1148-49.

Kalhaṇa mentions certain previous writers: Suvrata, whose work (he says) was made difficult by misplaced learning; Kshēmēndra, who drew up a list of kings, of which, however (he says) no part is free from mistakes; Nīlamuni, who wrote the Nīlamata-Purāṇa; Hēlārāja, who composed a list of kings in 12,000 verses; Padmamihira; and Chhavillākara. His own work, he tells us, was based on eleven collections of Rājakathās or 'stories about kings,'[1] and on the work of Nīlamuni. He says he sought to remove all errors by consulting charters issued by ancient kings, and laudatory inscriptions on stones, and manuscripts. And he has presented us with a detailed account of Kashmīr, including occasional items of external history, which purports to go back to 2448 B.C., and has given us the alleged exact details of the length of the reign of each successive king from 1182 B.C. onwards.

We may expect to find Kalhaṇa fairly correct for his own time, and for the preceding century or so. But an examination of the details of his work quickly exposes its imaginative character, and its unreliability for any earlier period. It places towards the close of the period 2448 to 1182 B.C. the great Maurya king Aśōka, whose real initial date, as determined by his *abhishēka* or anointment to the sovereignty, was 264 B.C. (see JRAS, 1906. 985 f.). It places in 704 to 634 B.C. Mihirakula, the great foreign invader of India, whose real period was closely about A.D. 530 (F.GI, introd. 11). It places about seven centuries after Mihirakula a Tōramāṇa, the original of whom can hardly be any other than Tōramāṇa the father of Mihirakula. And, though Kalhaṇa could put forward such exact details as four years, nine months, and one day for the duration of the reign of Mātṛigupta (A.D. 106 to 111, as placed by him), he was obliged to allot to Raṇāditya I. a reign of three centuries (A.D. 222 to 522), simply in order to save his own chronology.

[1] Compare, especially as helping to illustrate how fictitious matter might come to be introduced into such stories and to be disseminated by them, the discourse about religion, and the recital of the praises of ancient and recent devotees of Śiva, in which Sōmēśvara IV. and his commander-in-chief indulged on a certain occasion (EI, 5. 258; see also ibid. 233, for another instance of a *dharmaprasaṅga* or talk about religion between village officials).

G. General Literature and Historical Romances

With those exceptions, namely, the historical chapters of the Purāṇas and the Rājataraṁgiṇī, the ancient Hindūs seem to have never made any real attempt to deal with history on general lines. They have left us to gather what we can from their ordinary literary works, into which they have occasionally introduced historical matter, but, as can clearly be seen, only as an incidental detail of quite secondary and subordinate importance. General literature and historical romances.

In the body of their literature, the Hindūs do not help us much. The plots of some of the plays, the classical poems, and the collections of imaginative stories, were woven round historic names, both of persons and of places. But it is seldom, except in the geographical line, that such allusions can be put to any practical use. They help us to locate places, and to fix the limits of countries. For instance, we know, from other sources, that the ancient Tāmaliptī is the modern Tamlūk in the Midnapūr District; and thus an incidental statement of the Daśakumāracharita, that Tāmaliptī was in the Suhma country[1], gives us a more precise indication than is obtainable elsewhere as to the exact part of Bengal that was known by the name of Suhma. So, also, for another part of Bengal, the statement in the Dīgha-Nikāya, 1. 111; 2. 235, that Champā, which is known to be represented by a village which forms the western part of the town of Bhāgalpūr, was in Aṅga, gives us a similar indication as to the exact position of the Aṅga country. And they help us to establish the antiquity of places: thus, we know, from the Aihoḷe inscription of the time of Pulakēśin II, that the celebrated poet Kālidāsa flourished before A.D. 634; and so the mention by him, in the Raghuvaṁśa, 8. 33, of Gōkarṇa, in the North Kanara District, carries back the existence of that place, as a famous Śaiva site, to at least the beginning of the seventh century A.D. In the historical line, however, the allusions teach us little, if anything. The works do not give dates for what is told in them: and naturally enough: the similar productions of other countries, also, do not aim at being historical records, and at including chronological details. The works in question are of use, historically, only when the

[1] The name is actually presented as Dāmalipta in the text, in the beginning of the sixth chapter, both in Wilson's edition and in Peterson's. There is, however, no question about that form being only a variant of the better known Tāmaliptī.

date of an author happens to be known, and we are enabled thereby to fix a latest possible limit for an historic name, mentioned by him, for which we have otherwise no specific date at all.

There are, indeed, a few compositions which put forward certain distinct historical pretensions, but which cannot, in truth, be taken as anything more serious than historical romances.

In Sanskrit, we have in prose the Harshacharita of Bāṇa, and in verse the Vikramāṅkadēvacharita of Bilhaṇa. The first deals with the achievements or career of the great northern king Harsha, Harshadēva, or Harshavardhana, of Ṭhāṇēsar and Kanauj (A.D. 605-6 to about 648); and the second deals, in the same way, with an equally great southern king of later times, the Western Chālukya Vikramāditya VI, of Kalyāṇi (A.D. 1076 to 1126). Thus they both aim at being historical chronicles of those two periods. But they do not present the plain straightforward language of sober common sense. They imitate the classical poems, with all their elaboration of diction, metaphor, and imagery. They weave into their stories mythical and supernatural matter of the most fanciful kind. And they give us some charming reading in the poetical line. But they offer us not much beyond that. The historical information contained in the Harshacharita might be summed up very briefly. That in the Vikramāṅkadēvacharita is more extensive; mixed up, on the other hand, with more imaginative matter than is found in Bāṇa's work. But neither author has given us a date for anything that is mentioned by him. We do not blame them for this: the authors of the modern European historical novels rarely give dates; and, when they do, we should hardly accept their statements for quotation without verification. We only remark that no dates are given. Bāṇa, for instance, tells us that Harshavardhana was born 'in the month Jyaishṭha, on the twelfth day of the dark fortnight, when the moon was standing in the Pleiades, just after the twilight time, when the young night had begun to climb;'[1] but he has not given us any statement as to the year. And Bilhaṇa tells us that, when Vikramāditya was born, 'flowers fell from the sky, Indra's drum resounded, and the gods rejoiced in heaven' (IA, 5.318); but he does not even name the month and day. Neither

[1] Translation by Cowell and Thomas, 109; but with a correction, in respect of the allusion to the Pleiades, from the text, Kashmīr edition, 284.

author has given us even his own date. And so, if Harsha-vardhana and Vikramâditya were not known from more exact sources of a different kind, we should not even know to what period to refer the poets and their patrons.

In the same category we must place the Tamil historical poems, the Kaḷavaḷi, the Kaliṅgattu-Paraṇi, and the Vikrama-Chōḷan-Uḷā, for our introduction to which we are indebted to Mr. V. Kanakasabhai Pillai (IA, 18. 259; 19. 329; 22. 141). In these, again, there is a great deal of charming reading, and much of interest, and a good deal of importance. But here, also, there are no dates, and therefore no means in the works themselves for determining the periods to which they belong.

These works, the dramas, the classical poems, the imaginative stories, and the historical romances, and so also the Buddhist writings both Sanskrit and Pâli, are invaluable for the study of manners and customs, trade and commerce, methods and routes of communication, geographical hints, and the details of domestic, social, public, and religious life. They would furnish excellent materials for articles such as those which the Rev. T. Foulkes has given us, from the Buddhist works, on the Deccan in the time of Gautama-Buddha (IA, 16. 1 ff., 49 ff.). And they supplement the epigraphic records admirably. But that is all they do. And, even in respect of the results which we do obtain from such sources, we must always remember that the ancient Hindû writers were not archaeologists, and that, consequently, the results are liable to be for the times in which the writers wrote, rather than for the times to which their works refer.

H. Introductions and Colophons of Literary Works

It is only in the introductions and colophons of their literary works, for a knowledge of which we are indebted largely to the detailed reports of Professor Peterson and of Dr. Bhandarkar on Sanskrit manuscripts, that the Hindûs have thought it worth their while to give us any dates to accompany such historical details as they put forward. Here, the dates are useful enough. But we find that the historical matter is introduced only incidentally, to magnify the importance of the authors themselves rather than of their patrons, and is not handled with any particular care and fullness. As typical illustrations, we take the following cases.

Introductions and colophons of literary works.

Sōmadēva tells us, in the colophon of his Yaśastilaka[1], that he finished that work in the month Chaitra, the Śaka year 881

[1] Peterson's *Second Report*, 47.

expired, falling in A.D. 959, during the rule of a Chālukya prince who was the eldest son of Arikēsarin and was a feudatory of a king Kṛishṇarājadēva. But he does not take the trouble to tell us the name ot the prince, presumably his immediate patron, or to state the family or even the parentage of the king, or to indicate the territory of either the sovereign or his vassal. In this case, as it happens, we learn more about the family of the prince from the Vikramārjunavijaya or Pampa-Bhārata of Pampa, who, writing A.D. 941–42, mentions as his patron the aforesaid Arikēsarin, and gives his pedigree for seven preceding generations, with apparently a tolerably definite hint as to the part of the country to which he belonged[1]. As regards the king Kṛishṇarājadēva, we knew, from the epigraphic records, the Rāshṭrakūṭa king Kṛishṇa III, for whom we had dates in A.D. 940 and 956. And, there being no extraneous objections, we did not hesitate to identify Sōmadēva's Kṛishṇarājadēva with this Kṛishṇa III, and to extend the reign of the latter to A.D. 959, even before obtaining for him a later epigraphic date in A.D. 961 (see EI, 6. 180). In this way, Sōmadēva's literary reference usefully supplemented the inscriptions. But it teaches us, in itself, little enough. And, by the way, he might plainly have told us even a good deal more than he has. The preamble of the letter issued by his hero king Yaśōdhara[2], particularly in its introduction of the titles 'supreme lord of the town Padmāvatīpura, lord of the mountain Kanakagiri, and owner of the Kailāsa-crest,' as well as in other details, is no mere ordinary epistle, but is an imitation of the formal preamble of a grant; from which we gather that Sōmadēva had access to official papers, and used one of the drafts kept on hand for preparing charters of grants.

Take, again, the case of Jahlaṇa. In the introduction to his Subhāshitamuktāvali, written in the period A.D. 1247 to 1260[3], he states carefully the relationships in his own pedigree, but omits to state them in the case of the Dēvagiri-Yādava kings Bhillama, Siṅghaṇa, and Kṛishṇa, and their ancestor Mallugi, whom he mentions.

Take, finally, the case of Hēmādri. Writing in the period A.D. 1260 to 1271, in the time of the Dēvagiri-Yādava king Mahādēva, under whom, as also under his successor Rāmachandra, he held the post of Śrīkaraṇādhipa or super-

[1] Rice's Pampa-Bhārata, canto 1, verses 15 to 42.

[2] Peterson's *Second Report*, 39.

[3] Bhandarkar's *Report* for 1887-88 to 1890-91. notices, 7.

intendent of the business connected with the drawing up of documents, he aimed, in the introduction to his Vratakhaṇḍa[1], at giving the full pedigree, with incidental historical items, of that branch of the Yādavas from even Purāṇic times. In spite, however, of the free access that he must have had to the chronicles and official records of the family within the historical period, he has omitted, several times, to state the exact relationships of the successive members of the family; he has apparently passed over altogether one of them, Sēuṇadēva, whose existence is established by an epigraphic record; and, as tested by an inscription of A.D. 1191 at Gadag (EI, 3. 216; and see F.DKD, 516), he has suggested an altogether wrong inference regarding the parentage of Bhillama, the first paramount king in the family, within only a century before the time at which he was writing.

I. The Inscriptions

The dates which are given in the introductions and colophons of the literary works, in connexion with the composition of those works, may of course be accepted as reliable; and any genealogical and historical items put forward in the same places ought to be correct for a few preceding generations. But it would be a very extraordinary and imperfect history of India that we should put together from such references, and from the Purāṇas, the Rājataraṁgiṇī, the historical romances, the general body of the literature, such Vaṁśāvalis as have been obtained from Orissa and Nēpāl, and the few items of alleged history that are incidentally given in the Paṭṭāvalis. The inscriptions.

We should doubtless recognize that the successions of kings given for India itself by the Purāṇas, for Kashmīr by the Rājataraṁgiṇī, and for Nēpāl by the Vaṁśāvali, should be taken as separate successions, in territories the histories of which must be treated separately. We should not know exactly what conclusion to arrive at in respect of the annals of Orissa, which is a province of India itself. But, having regard to the preposterous duration allotted to each of the reigns from 3102 to 58 B.C., we should doubtless decide that all memory of the true history of that period had been lost in Orissa, and that from the next fixed point, A.D. 78, Orissa was an independent province with a history and a line of kings of its own. We could scarcely fail to detect the occurrence, in the Purāṇas, the Rājataraṁgiṇī, and the Nēpāl

[1] Bhandarkar's text in the *Gazetteer of the Bombay Presidency*, i, part 2. 268.

Vaṁśāvali, of one particular name, that of Aśōka, which ought to establish a definite synchronous point in the histories of the three countries. We should not be able to deduce the date of Aśōka from the Purāṇas. But we should find that the Rājataraṁginī would place him somewhere about 1260 B.C. We should find, indeed, that the Nēpāl Vaṁśāvali would place him, roughly, about 2600 B.C. As, however, that list does not mention him as a ruler of Nēpāl, but only as a visitor to the country, we should probably infer a mistake in that account, and prefer to select the date of 1260 B.C. And then we should set about arranging the succession of the kings of India itself, from the Purāṇas, with 1260 B.C. for the approximate date of the accession of Aśōka as our starting-point[1].

We should then examine the other available sources of information. And probably we should first note, from the Jain Paṭṭāvalis, the king Vanarāja, who is said to have founded Aṇhilwāḍ, in Gujarāt, in A.D. 746 (IA, 11. 253); and we should obtain the alleged succession at Aṇhilwāḍ after him, with an initial date for each king, to A.D. 1304, from the Pravachanaparīkshā of Dharmasāgara[2]. From the literary works we should obtain a few names, with fixed dates, such as the following. Jinasēna tells us (see EI, 6. 195), in the Jain Harivaṁśa, in connexion with the date of that work, that in A.D. 783–84 there were reigning—in various directions determined with reference to a town named Vardhamānapura, which is to be identified with the modern Waḍhwāṇ in the Jhālāvāḍ division of Kāṭhiāwār—in the north, Indrāyudha; in the south, Śrīvallabha; in the east, Vatsarāja, king of Avanti (Ujjain); in the west, Varāha or Jayavarāha, in the territory of the Sauryas. And from the Channabasavapurāṇa we should have (but, in this case, falsely; because his real date was A.D. 1156 to 1167) a king Bijjala reigning at Kalyāṇi, in the Nizam's Dominions, contemporaneously with them. Guṇabhadra gives us, in recording the completion of his Uttarapurāṇa (see IA, 12. 217), a king Akālavarsha, with the date of A.D. 897. Pampa gives us (see page 20 above) a Chālukya prince Arikēsarin, with the date of A.D. 941, with his pedigree for seven generations, and with, apparently, a hint that he was ruling the territory round the modern Lakshmēshwar in the Dhārwār District. Sōmadēva gives us

[1] A beginning was actually made, in almost the manner suggested above, by Sir William Jones; see his dissertation on the Chronology of the Hindūs written in 1788 (AR, 2. 111, reprint of 1799). But he took a different starting-point, which he fixed in a different way.

[2] Bhandarkar's *Report* for 1883–84. 150, 456.

(see page 20 above) a king Kṛishṇa, with the date of A.D. 959. Ranna gives us[1] a king Āhavamalla, reigning in A.D. 983. A later Sōmadēva gives us (IA, 10. 75) a Bhōja, ruling in the Kōlhāpūr territory in A.D. 1205. And Jñānēśvara gives us[2] a Rāmachandra, reigning in A.D. 1290; while another work (see IA, 21. 51) gives a date for the same king in A.D. 1297, and shows that the Koṅkaṇ was a part of his dominions.

In the way of definite names with uncertain dates, we should have from Jahlaṇa (see page 20 above) another king Kṛishṇa, with his predecessors Mallugi, Bhillama, and Siṅghaṇa, whom we could not place in any particular period from his information alone. And we should have from Hēmādri (see page 20 f. above) a much longer list, in which we should recognize the same names, without, however, here again the means of referring them to any particular period. We should probably obtain the right clue here from the fact that Hēmādri elsewhere mentions, as the successor of his king Mahādēva, a Rāmachandra who, we should guess, ought to be identified with the Rāmachandra of A.D. 1290 and 1297. But in the case of Bāṇa's Harsha (Harshavardhana) and Bilhaṇa's Vikramāditya, we should in all probability go completely wrong: the temptation would be almost irresistible to identify Vikramāditya either with a Vikramāditya who is mentioned in the Rājataraṁgiṇī, 2. 5, 6, as a contemporary of Pratāpāditya of Kashmīr in the asserted period 180 to 148 B.C., or else with the Vikramāditya of Ujjain of the Vikrama-legend (see page 4 above, and note 2), who is supposed according to one version to have died, according to another to have begun to reign, in 58 B.C., and to identify Harsha with a certain Harsha-Vikramāditya, king of Ujjain, who is mentioned in the Rājataraṁgiṇī, 3. 125 ff., as a contemporary of Hiraṇya and Mātṛigupta of Kashmīr in the asserted period A.D. 76 to 111.

We should look in vain in the Purāṇas for any of the names obtained from the literature and the Paṭṭāvalis. But we should, to the best of our ability, work those names, and the dates connected with them, into the list obtained from the Purāṇas and in continuation of it. And we should possibly be working into it also some quite modern inventions, such as those of the bards of Kāṭhiāwār (see F.GI, introd., 49), which were at one time supposed to be 'old-world tales,' but which really sprang into existence some quarter of a century ago, and owe their

[1] Rice's Karṇāṭakaśabdānuśāsanam, introd., 28.

[2] See *Gazetteer of the Bombay Presidency*, i, part 2. 250.

origin only to certain modern speculations which had found their way to the bards through an educational treatise.

In this way we should build up a chronological list of the rulers of India, and of some of its provinces, with 1260 B.C. as a starting-point. Then, sooner or later, we should be met by the discovery that Chandragupta, the grandfather of Aśōka, was known to the Greeks as Sandrokottos, and that his initial date is fixed very closely about 320 B.C. by the Greek writers. We should thus learn that Aśōka could not be placed before about 265 B.C.[1]. All the early part of our arrangements would be upset by a thousand years. And the subject would become a maze of bewilderment, confusion, and speculation, to be approached afresh from an entirely new point of view.

Fortunately, the discovery about Chandragupta was made and announced in 1793 by Sir William Jones[2], before speculation into the ancient history of India had gone very far; and, fortunately, a few of the inscriptions had already begun to come to notice. From that time, more and more attention was paid to them; particularly from the time when they were taken in hand by Mr. James Prinsep, who first succeeded in deciphering the records of Aśōka, and, in that and other ways, laid the real foundations of the whole superstructure that has been subsequently reared up. And it is with relief that we turn to the inscriptions, and lay aside any further consideration of the position in which we should have found ourselves without them.

III. The Materials on which the Inscriptions have been recorded

The material on which the inscriptions have been recorded.

We have explained and illustrated the value of the Indian inscriptions. We come now to the consideration of the nature of them, from two points of view; as regards the materials on which they have been recorded, and as regards the topics of them.

It will be convenient to take first the materials on which the inscriptions have been recorded. These divide themselves into two leading categories; of metals, and of other substances than metal.

[1] With the initial date of Chandragupta in 320 B.C., Aśōka reigned from 264 to 227 B.C. (see JRAS, 1906. 984 ff.). He then (see ibid., 1904. 355) abdicated, and passed into religious retirement, as a Buddhist monk, in a cell on the mountain Suvarṇagiri, Sōngīr, one of the hills surrounding the ancient city Girivraja in Magadha, Bihār.

[2] AR, 4. Anniversary Discourse, 13, reprint of 1798.

A. Metals

1. Iron

Amongst the incriptions on metal, there is one that stands out by itself, in respect of the peculiarity of having been incised on iron. It is the short poem, constituting the epitaph of the Gupta king Chandragupta II. (F.GI, 139), which was composed in or about A.D. 415, and was placed on record on the iron column, measuring 23 ft. 8 inches in height, and estimated to weigh more than six tons, which stands at Meharaulī near Delhi. Metals. Iron.

The iron pillar itself is not unique. There is another, in fragments, which was apparently nearly twice the height of the Meharaulī column, at Dhār in Central India. But, while the Dhār column bears a Persian inscription of Akbar, incised in A.D. 1591–92, and a few names and letters in Nāgarī as well as Persian characters, there is no original record on it, placed there when it was set up.

2. Gold and Silver

On gold, we have a short Buddhist votive inscription from one of the Stūpas or relic-mounds at Gangu near Sir-Sukh in the Punjab[1] (ASI, 2. 130). Gold and silver.

On silver, we have a short record, not yet deciphered, from the Stūpa at Bhaṭṭiprōlu in the Kistna District of Madras (ASSI, 6. 13); and another, apparently dedicatory, on a small disc which was found in a Stūpa at Māṇikiāla in the Rāwalpiṇḍī District of the Punjab (ASI. 2. 160).

3. Brass

Records on brass are more numerous. Amongst them we may mention prominently the following:— Brass.

From a Stūpa at Wardak in Afghānistān, we have a brass relic-vase with an inscription the date of which falls in 6 B.C. (*Ariana Antiqua*, 118; JRAS, 1863. 255).

From Kōsam near Allahābād, we have an inscribed brass seal-ring, apparently of the Gupta period (ASI, 10. plate 2, No. 4).

From somewhere near Gayā, we have a brass image of Buddha, bearing on its pedestal an inscription which, marking

[1] It must be explained that 'Punjab' is the prescribed official form of the name which, otherwise, it is customary to present as 'Panjāb.' There may perhaps be noticed in this chapter a few other place-names, in respect of which comments might be made.

e as a votive gift, is also of special interest in pre- specimen of the nail-headed alphabet (IA, 19. 77).
rom the Chambā State there have been obtained some ages, bearing inscriptions which give the names both ng who caused them to be made and of the workmen le them[1].

4. Bronze

ronze, we have some interesting stamps for making RAS, 1901. 98, plate, Nos. 8, 9, 11, 12, 14; 1905. 814, os. 17 to 20); and one of them (No. 20) is of particular n presenting its legend in three classes of characters, Kharōshṭhī or Kharōshṭrī[2], and Greek.
o have a bronze head, obtained at Peshāwar, bearing base of it an inscription, which cannot be deciphered the illustration of it, but seems to mark it as a votive ASB, 5, 1836. 484, and plate 26).
jority of the seals attached to the copperplate records ied farther on—at any rate, the more elaborate ones, late—must probably be held to be in reality of bronze: copper would hardly have brought out the details of s and legends so completely.
illed examination would perhaps stamp as being of ather than copper, the signet-ring of the Mahārāja anāga which is noticed on page 31 below.

5. Copper

most part, however, the known inscriptions on metal ed on sheets of copper, ranging in size from about by $1\frac{7}{8}$ inches in the case of a small and very early btained at Sōhgaurā in the Gōrakhpūr District, rovinces of Agra and Oudh (JRAS, 1907. 509), to as about 2 ft. 6 inches square in the case of a record c. obtained at Suē-Vihār in the neighbourhood of ur in the Punjab (IA, 10. 324; 11. 128).
f these records on copper were commemorative and , and were deposited inside the erections—relic- and, in the case of the Suē-Vihār plate, a tower— they belonged.

[1] *Report of the Archaeological Survey of India* for 1902-3. 242: I, 14. plate 28.
[2] al to follow Professor Bühler in using the form 'Kharōshṭhī.' no means certain that M. Sylvain Lévi is not right in holding l name of these characters is 'Kharōshṭrī.'

The usual copper record, however, was a donative charter, in fact a title-deed, and passed, as soon as it was issued, into private personal custody. And many of the known records of this class have come to notice through being produced by the modern possessors of them before official authorities, in the expectation of establishing privileges which (it is hardly necessary to say) have long since ceased to exist through the lapse of time, the dying out of families of original holders, rights of conquest, and the many changes of government that have taken place. It is, therefore, in private hands that we must still look to find the majority of those that remain extant but unknown. But others have been found buried in fields, and hidden in the walls and foundations of buildings. And the decay of old erections, and the excavation of ancient sites, may at any time yield a rich harvest in this direction.

A point that must always be borne in mind in connexion with these donative records on copper is that many of them have, in the course of time, passed from hand to hand and place to place, so as to have been discovered, like coins, inscribed gems, seals, seal-stamps, images, and other portable articles, in localities far distant from those to which they really belong. We have a pointed instance of this in the so-called Vakkalēri plates (EI, 5. 200). They contain a charter issued by the Western Chalukya king Kīrtivarman II. in A.D. 757. The grant was made when the king was encamped at a place specified in the record itself as Bhaṇḍāragaviṭṭage, on the north bank of the river Bhīmarathī; that is (see EI, 6. additions and corrections, A), at the modern Bhaṇḍār-Kauṭhēṁ, on the north bank of the Bhīmā, about twenty miles south-west from Shōlāpūr in the Bombay Presidency. And probably the plates were prepared and issued at that place, and were sent thence to the donee by a special officer, frequently mentioned in other similar records as the Dūtaka, 'the messenger.' But, whatever may have been the case in that respect, the charter conveyed a village named Suḻḻiyūr, situated in the immediate vicinity of Hāngal in the Dhārwār District. And the grantee must have resided somewhere there, on or close to the property that was given to him; and he must have had the record there in his possession, for production in case his title to the property should ever be questioned. The plates, however, eventually found their way to, and came to light from, the village of Vakkalēri in a distant part of Mysore.

The result of this peculiarity is as follows. A stone record

almost invariably establishes the sovereignty or other jurisdiction, at the place itself where it stands, of any king, etc., by whose orders or in whose time it was drawn up. But, in the case of a copper charter, any such question usually depends entirely upon a successful identification of any places mentioned in it; and the find-places of such records frequently do not help us at all in this matter, except in indicating localities in which we may look first in the process of identification. To emphasize the point, and to prevent constantly occurring misconceptions, we shall have, some day, to rename all the copper records more precisely. The so-called Vakkalēri plates would be more correctly described as the Suḷḷiyūr grant: as regards its historical bearing, it is the country round Hāngal in the Dhārwār District, Bombay, not the Kōlār District in Mysore, which this record places in the territory of Kīrtivarman II. Another pointed case is that of the seal of the Maukhari king Śarvavarman (F.GI, 219), which was found at Aśīrgaṛh in the Nimāṛ District, Central Provinces, some fifty miles to the south of the Narbadā: it is unmistakably a record of Northern India; and it had no original connexion with the locality in which it was found.

It may be added that, in view of the nature of the purport of nearly all the records on copper, epigraphists are in the habit of speaking of them as 'grants,' using the term 'inscriptions' more particularly in connexion with the records on stone. But, as will be made clear in the next section, there is no radical difference in nature, such as might be inferred from this difference in nomenclature, between the records of the two classes. The inscriptions on stone are for the most part donative charters, just as is the case with the large majority of the inscriptions on metal. On the other hand, some of the copper records are, like some of the stone records, simply commemorative or dedicatory.

The copper records call themselves sometimes *paṭṭikā*, 'a tablet, a plate' (e.g., EI. 1. 7, line 51), and sometimes *tāmra-paṭṭikā*, 'a copper tablet' (e.g., IA, 5. 52, line 34). But the expression more usually met with is either *śāsana*, 'a charter' (e.g., F.GI, 240, line 61), or *tāmra-śāsana*, 'a copper charter' (e.g., F.GI, 108, line 10). The term *triphalī-tāmra-śāsana*, 'a triplicate copper charter,' is found (EI, 3. 345) in the case of three separate records which are copies of each other, except only in respect of the specification of the different villages conveyed by them. And two instances are known (IA, 13. 121, line 21; H.SII, 1. 151, line 89) of the use of the

term *praśasti*, 'a eulogy,' which is elsewhere found only in connexion with records on stone.

The plates on which these inscriptions were incised vary greatly in the number of the leaves, in the size and shape of them, and in the arrangement of the records on them; partly, of course, according to the lengths of individual records, but also according to particular customs and fashions prevalent in different parts of the country and in different periods time. In some cases a single plate was used; and it was inscribed sometimes on only one side of it, sometimes on both. More often, however, more plates than one were used; and the number ranges up to as many as eleven in the case of the Kaśākūḍi record of the Pallava king Pallavamalla-Nandivarman, of some time about A.D. 733 to 747 (H.SII, 2. 342). When more plates than two were used, they were sometimes numbered (e.g., IA, 5. 50, 154, 176; 7. 191; EI, 1. 2; 5. 106; 6. 84, 315; 8. 143, 159). In a few records on stone, the lines were numbered (e.g., PSOCI, Nos. 116, 124, 141, 192); but no instance can be cited of that having been done in the case of a record on metal.

In the case of records on copper covering more plates than one, it was customary to string the plates together by one or two copper rings, passing through round holes in them; much after the fashion in which the leaves of Indian manuscripts are strung together by threads.

6. Seals of Copperplate Records

It was also customary that such of the records on copper as were donative charters should be authenticated. And the most usual method of giving the authentication was by attaching a copper or bronze reproduction of the royal seal.

Seals of copper-plate records.

This emblem of sovereignty and power, whether in the shape of an actual seal made from a stamp, or in the shape of a stamp or a signet-ring for making a seal, no doubt played in India quite as important a part, in many ways, as it has always played in other eastern lands and in the west. And, in support of our belief, we may appropriately quote the following instances. In one direction, in the line of romance, a dexterous use of the royal signet was made by Kālidāsa, in his well-known play, the plot of which hinges upon the recognition of his wife Śakuntalā by king Dushyanta being evoked by the sight of the ring which he had given her, incised with the letters of his name. So also, the signet-ring of the fugitive minister, with his name engraved upon it, plays a part

in the Mudrārākshasa. In another direction, in the line of practical affairs, we learn from the *Life* of the Chinese pilgrim Hiuen-tsiang (Julien, 260; Beal, 190) that, when he finally took leave of king Harshavardhana of Ṭhāṇēsar and Kanauj, the king furnished him with letters, written on fine white cotton stuff and certified by impressions of his seal made in red wax, which the officers of his escort were to present in all the countries through which they conducted the Master, to the end that the princes of those countries should provide carriages or other means of conveyance for the Master even to the borders of China.

And to the seal of Harshavardhana there is another allusion, in the Harshacharita of Bāṇa, which is worth citing, not only because it is a happy one, but also because it is instructive in mentioning another manner in which it was customary to make the seal; namely, by stamping it on a ball or disc of clay. The Hebrews seem to have made seals in the same way: 'it is turned as clay to the seal,' or 'it is changed as clay under the seal' (Job xxxviii. 14). And the backs and other parts of some extant specimens of Indian clay seals show distinctly the lines and the graining of the palms of the hands in which the clay was held in making the impressions [1].

The passage in question in the Harshacharita (Kashmīr edition, 430; and see the translation by Cowell and Thomas, 198) sets out that, when king Harshavardhana was about to make his expedition against the king of Gauḍa, a starting-point was selected, and a temporary encampment was made, at a suitable place, not far from his capital, on the bank of the river Sarasvatī. There the Grāmākshapaṭalika, or keeper of the village-records, came before the king, and asked him to issue the orders for the day, and presented a newly made golden stamp (*mudrā*), bearing the device of a bull, wherewith he was to make a seal authenticating the orders. As soon, however, as a ball or disc of clay was produced for that purpose, the stamp slipped from the king's hand, and fell face downwards upon some almost dry black mire which served as an inking-pad, and then rolled onto a spot of soft clay. And so the lines of letters of the legend on the stamp were distinctly marked on the bank of the river. The bystanders saw in that a bad omen. But the king deduced from it the auspicious augury, that the whole earth should be stamped with the single seal of his sole command.

[1] See JRAS, 1901. 103; also *Annual Report of the Archaeological Survey of India* for 1903-4. 101.

Here, plainly, Harshavardhana was to have used, not a signet-ring, but a stamp of the same kind with some which have been mentioned on page 26 above, under the heading of inscriptions on bronze.

Indian kings, princes, and high ministers, however, used also signet-rings, with which they could make their seals as occasion might require, or, of course, which they might themselves exhibit when necessary, or might entrust to others to be used as a voucher or token. Not only do we gather that from the Abhijñānaśakuntala and the Mudrārākshasa, but also we have an actual specimen of such a ring, referable to the fourth century A.D., which was obtained at Lahore (F.GI, 282). That specimen is an exaggerated signet-ring, made of copper or bronze, closely resembling the ordinary English pattern, and of the kind which may still be seen worn loosely on the thumbs of ministers of Native States. From the flat surface of the signet to the bottom of the ring, it is about 1¼ inches high. The surface of the signet is about 1/16 inch thick, and is slightly oval in shape, about 1⅞ by 1⅝ inches. On it there is a legend, in two lines, of which the purport is: 'The Mahārāja Mahēśvaranāga, son of Nāgabhaṭṭa;' above the legend, and separated from it by a line serving the same purpose with the bar which usually stands below the heraldic device on an English signet-ring, there is a bull couchant, with a crescent moon; and below the legend there is a snake. The legend is in reverse in the original; and both it and the devices are sunk in the surface of the signet. Accordingly, if pressed, uninked, on some soft substance, this signet-ring would bring out the legend and devices in relief on a plain flat ground. If inked and then pressed on such a substance, it would bring them out in white relief on a black ground; as, we are to understand, was done by Harshavardhana's stamp according to Bāṇa. If inked and pressed on some hard substance, or on cloth stretched tight[1], it would bring them out in white on a black field.

This custom of thus attaching the royal authentication to charters has given us a large and highly interesting series of ancient Indian seals, some of them presenting devices only, others only legends, and others both legends and devices, and some of them being of an extremely elaborate kind. And

[1] For mention of the stamping of cloth fabrics, by way of ornamentation, but apparently not exactly in this fashion, see the Rājataraṅgiṇī, ii. 294 ff., 299.

from various statements in the records we know that the sole or the principal device, as the case may be, was almost always the *lāñchhana* or crest, which was usually different from the device emblazoned on the *dhvaja* or banner (see F.DKD, 299, note 4). The same device, the crest, was used on coins also, and sometimes with inscriptions on stone. And it usually took the form of some animal; a bull, a boar, a lion, a tiger, a fish, the bird-man Garuḍa, the monkey-god Hanumat, and so on. It was probably largely used on shields also, though at present there can be cited to that effect only one indication, which is found in an inscription on stone at Baḷagāmi in Mysore (PSOCI, No. 205); in the sculptures, showing a battle-scene, in the bottom compartment of that stone, the shields on the right side distinctly bear animals, which are apparently in one case a lion and in the other a boar.

In the case of records on single plates, it was customary to weld or otherwise fasten the seals on to the plates themselves; sometimes at the left side, before the lines of the inscription (e.g., F.GI, 256; IA, 15. 112, 140; EI, 6. 133, 140), and sometimes at the top (e.g., JASB, 47, 1878. 384; 63, 1894. 58). For some instances of seals which were once attached in this way, but have become separated from the plates to which they belonged, reference may be made to the fine Bhitarī seal of Kumāragupta II. (JASB, 58, 1889. 85), and to the still more elaborate Aśīrgaṛh seal of the Maukhari king Śarvavarman (F.GI, 220). We have also a seal of Harshavardhana, from Sōnpat (F.GI, 230); but it is not in the same excellent state of preservation.

In the case of charters consisting of more plates than one, the seal was treated in another manner, and was made to serve as a safeguard in addition to being a mark of authentication. This was effected by attaching it to the single ring when there was only one, and to one of the two rings when there were two. And the usual process seems to have been, first to rivet or otherwise join the ends of the ring, and then to cast the seal over the joint, so that the component parts of the record could not be separated without intentionally severing the rings. The result is that most of the seals attached to the charters in this way imitate the shape of exaggerated signet-rings, of varying sizes. But, together with the seals fixed on to the plates themselves, they represent real seals, not reversed stamps for making seals. As has been mentioned on page 26 above, probably they are for the most part of bronze, rather than of copper.

In this class of seals, for some which bear devices only, reference may be made to the plates at IA, 5. 50; 6. 23; 7. 39, 161, 252; 8. 27, 44; 9. 35, 103, 124; 11. 112, 126, 161; 12. 160; EI, 2. 352; 3. 104, 276; 4. 244; JBBRAS, 15. 386; B.ESIP, 106. For some seals with legends only, see the plates at F.GI, 108, 234; EI, 3. 261; 4. 244. And, for some seals with both legends and devices, see the plates at F.GI, 128, 169, 194, 198, 296; IA, 1. 16; 6. 25, 33; 7. 17, 190, 253; 8. 47, 320; 12. 93, 267; 13. 137, 249; 18. 234; 19. 310; EI, 2. 364; 3. 104; 4. 244; 6. 294; JRAS, 1865. 247; JASB. 86, 1897. 124; B.ESIP, 106. Some of the references given above illustrate clearly also the various shapes of rings and diverse methods of attaching the seals to them.

Sometimes an additional authentication was given by what purported to be more or less an autograph signature of the king or prince from whom a charter emanated, usually introduced by words meaning either 'this is the own hand of me' or 'this is the pleasure of me.' The signature is sometimes in characters of the same class with those used in the body of the record (e.g., IA, 6. 19, 193; 16. 202, 206; EI, 1. 317; 4. 210; 6. 294), and sometimes in different characters (e.g., IA, 13. 79; 14. 210; PSOCI, No. 282). Occasionally it is accompanied by marks evidently intended to represent some kind of a sign-manual (e.g., IA, 6. 19; 14. 201; EI, 6. 294).

There are a few cases in which an image was employed instead of a seal. The ends of the ring on which were strung the Khārēpāṭaṇ plates, bearing the record of the Śilāhāra prince Raṭṭarāja of A.D. 1008, were welded into the base of a small image of Garuḍa (EI, 3. 301). In the case of the Paiṭhaṇ record of A.D. 1272 of the Dēvagiri-Yādava king Rāmachandra (IA, 14. 314), on a plain ring which holds the plates together there slides another ring which is let into the back of an image of Garuḍa about 8½ inches high. In the case of the Kamauli plates of king Vaidyadēva of Prāgjyōtisha, an image of Gaṇapati is ensconced in a spoon-shaped receptacle which secured the ring on which the plates were strung (EI, 2. 352).

The Paiṭhaṇ record of A.D. 1272, mentioned in the preceding paragraph, is an epigraphic curiosity in respect of its weight. It is on three plates, each measuring about 1 ft. 3 inches in width by 1 ft. 8½ inches in height, which are so massive as to weigh 59 lb. 2 oz.; and the weight of the ring on which they were strung, and of the image of Garuḍa which was secured to it by the other ring, is 11 lb. 12 oz. Thus, the total weight

of this title-deed, which conveyed a village to fifty-seven Brāhmaṇs, is no less than 70 lb. 14 oz.; appreciably more than half a hundredweight.

B. Other Substances than Metal

Other substances than metal.

The inscriptions on other substances than metal are found on crystal; on clay, sometimes left to harden naturally, sometimes apparently hardened by some artificial means, and sometimes baked into terra-cotta or burnt into brick; on earthenware; and on stone in various forms. Inscribed wooden tablets and strips of leather secured by clay seals have been obtained in Central Asia; but it is not known that any such have been as yet found in India.

For the most part, whatever happened to be the material used, the records of this class were executed by engraving.

We have, however, a few written with ink on earthenware; from Bhōjpur, Sāñchi, and Andhēr in Central India (pages 40, 44, 45, below); from Chārsada in the North-West Frontier Province (page 40); and from Hidda in Afghānistān (*Ariana Antiqua*, 111, and 262, plate). Of these, the instances from Central India are the earliest, and are probably to be referred to the second or third century B.C.

And from the Ginja hill, in either the Allahābād District or the Rewah State, we have an inscription recorded by paint on a rock (ASI, 21. 119, and plate 30; EI, 3. 306, plate): it mentions a Mahārāja named Bhīmasēna; and it presents a date which places it either in A.D. 371 or in 5 B.C.[1] Other painted inscriptions, executed in that manner as an accompaniment to frescoes, have been found in the Buddhist caves at Ajaṇṭā in the Nizam's Dominions (ASWI, 4. 136, and plate 59).

In the case of votive tablets made of clay, the custom was to use incised stamps, prepared of course in reverse; with the result that, on the tablets on which the stamps were impressed the inscriptions, as well as any devices accompanying them, stand out in relief. And the results are the same in the case of clay seals, made from reversed metal dies or from anything in the shape of a stone matrix.

The inscriptions on brick were either incised with a stilus, or stamped with a die, before the clay was burnt into brick.

[1] This may seem rather a wide range of doubt. The fact is that we require a better reproduction of the record, to enable us to appreciate it properly and arrive at any decisive opinion as to its period.

In the case of inscriptions on stone, the devices and symbols, dynastic, religious, and of other kinds, which accompany some of them in Northern India and a large number of them in Southern India, were in the earliest instances incised in outline; but they were nearly always sculptured in relief from the time, the seventh century, when the use of them began to be frequent, and the nature of them became more or less elaborate. The records themselves, however, of the period covered by this account, were but rarely treated so. The Musalmān inscriptions were, it is believed, nearly always carved in relief. And various Hindū inscriptions were done in the same way in the Musalmān period. But only one instance of a record prepared in that way, otherwise than on metal, can as yet be cited for the earlier period; it is an inscription on the pedestal of an image of Buddha, of the Gupta period, found in excavations recently made at Sārnāth[1].

We have noted, on page 28 above, certain names by which some of the copperplate records designate themselves. Amongst the records on stone, some of the edicts of Aśōka style themselves *dhamma-lipi*, 'a writing of religion.' Various other records mention themselves by such names as *śilā-śāsana*, 'a stone charter;' *śilā-lēkha*, 'a stone writing;' and *praśasti*, 'a eulogy.' And other terms which occur are *śāsana*, 'a charter' (EI, 3. 5, line 19); *kallu-śāsana*, 'a stone charter' (EC, 3. Nj, 139, line 29); and *vīra-śāsana*, 'a charter or record of heroism' (PSOCI, No. 191; EC, 7. Sk, 144, last line).

We have also, on page 27 above, mentioned, and indicated the necessity of bearing in mind, the liability to travel, which has led to some of the copper charters being found in localities far distant from those to which they really belong. Records on stone were necessarily not so much liable to leave their original sites. But it is known (see ASI, 1. 161; 5. 143; 14. 78; JRAS, 1906. 407) that the two columns, bearing edicts of Aśōka, which now stand at Delhi, were brought there in the latter half of the fourteenth century under the orders of Fīrōz Shāh Tughlak; one from Meerut, and the other from Baṛā Topra, in the Ambālā District, some fifty miles from the Siwālik Hills. And it is supposed that the similar column which stands at Allahābād was originally set up at Kauśāmbī; because it bears, in addition to other records, an order of Aśōka addressed to the officials of Kauśāmbī. Also, it may be added, the opinion has been expressed that the inscribed iron pillar

[1] See *Progress Report of the Archaeological Survey*, Northern Circle, 1905–6. 33.

which stands at Meharaulī, near Delhi (see page 25 above) may have been taken to that place from Muttra.

1. Crystal

Crystal. Only one record on crystal, which may be classed as an inscription, can be cited; evidently, the material was found too hard for any general use to be made of it in the inscriptional line. The record in question is scratched, rather than engraved, on the six faces, each about ⅜ inch in breadth, of an hexagonal piece of crystal, measuring about 2¼ inches in breadth, and probably, as it is pierced by a hole through its axis, originally used for suspending round the neck as an amulet, which was found in the remains of a Buddhist Stūpa or relic-mound at Bhaṭṭiprōlu in the Kistna District of Madras (EI, 2. 324, plate; ASSI, 6. 11, and plates 1, 4, 5). The purport of the inscription (EI, 2. 329) is not at all certain; it may perhaps register a votive offering, made by a woman from a town named Nadapura, Nandapura, in recognition of recovery from a serious illness.

Along with many other articles, two crystal phials and one crystal casket were found in the Bhaṭṭiprōlu deposit; but there are no inscriptions on them, or on crystal articles found in similar deposits elsewhere. In connexion, however, with some of those articles, other expedients were adopted, to mark the nature of them, or to record the dedication of them.

A crystal relic-casket was found in the Stūpa No. 2 at Sōnārī, in the neighbourhood of the well-known Sāñchi in the Bhōpāl State, Central India. The casket itself was not inscribed. But inside it there was deposited a piece of stone, about ¾ inch long by ½ inch broad, bearing an inscription on the front and back (C.BT, 121, 316, and plate 24, 'box' No. 1). The purport of the inscription (JRAS, 1905. 687) is: '(*Relics*) of the sainted (literally, the good man) Gotiputa-Dudubhisara (or Duṁdubhisara), of the Himavat region, an heir of the faith.' This record gives us an historic name, of one of the four companions of Kotīputta-Kassapagotta, the missionary who (see page 44 below) was sent to the Himālayas by Moggaliputta-Tissa, in the time of Aśōka; and it helps to furnish valuable corroboration of the account of that mission given in the Dīpavaṁsa, 8. 10.

A crystal casket, obtained from the remains of a Stūpa at Kōlhāpūr in the Bombay Presidency, was found inside a stone box. Here, again, the crystal casket was not inscribed; but on the lid of the stone box there was engraved an inscription

(ASWI, No. 10, Cave-Temple Inscriptions, 39, and plate No. 1) to the purport: 'The gift of Bamha; caused to be made by Dhamaguta.'

2. Clay, Terra-cotta, and Brick

Clay, terra-cotta, and brick.

In various parts of India there are found, in large numbers, small inscribed tablets of clay, sometimes baked into terra-cotta, sometimes left to harden naturally. These tablets are called, as a matter of convenience, sometimes seals, sometimes discs; but neither term is exactly appropriate. The latter because these tablets are not uniformly round in shape: some of them are oval; others, rectangular. The former, because, for the most part, the nature of them is not such as to answer to any ordinary meaning of the word seal: they were mostly votive offerings.

The best-known instances of these tablets are Buddhist, and bear the verse, the so-called formula or creed, which (see the Vinayapiṭaka, ed. Oldenberg, I. 40) was pronounced by Assaji, one of the earliest followers of Buddha, and led to the conversion of those two persons, Sāriputta-Upatissa and Moggallāna-Kōlita, who became the chief disciples of Buddha. Sāriputta had asked Assaji who his teacher was, and what might be the essence of his doctrine. And Assaji replied: 'Of those conditions which spring from a cause, Tathāgata (Buddha) has declared the cause and the suppression of them; it is of such matters that he, the great Samaṇa, discourses.'

Of these votive tablets, some present the verse only (see, for instance, ASI, 11. plate 12, No. 13). Others exhibit with the verse a representation of a Stūpa (ibid., No. 12). Others exhibit, as an accompaniment, one or more Stūpas and perhaps a number of bells (ibid., plate 28, Nos. 2, 3). Others show, above the verse, and with an accompaniment of Stūpas, sometimes a Buddha seated on a throne, in the act of teaching (C.MG, plate 24, C), but more usually a Buddha squatting in the posture of meditation (ibid., D, E, F).

Others of these objects present, instead of the verse, other inscriptions, varying in length, some of which may be worth studying (C.MG, plate 24, Nos. 5, 6; ASI, 11. plate 28, No. 1); but the characters are so small that they are very difficult to read.

In short, the varieties of these Buddhist votive tablets are numerous; and it may be remarked here that in some cases the substance from which they were made was, not clay, but bees' wax (ASI, 3. 158, and plate 46, Nos. 2, 3). In some

of the deposits, along with the usual Buddhist tablets there are found others, of the same make, but more of the nature of ordinary seals, which present sometimes devices only, sometimes only legends, and sometimes both legends and devices (ASI, 11. plate 12, Nos. 1 to 10). In one case we have, not a tablet prepared for presentation, but a stamp or mould, technically a matrix, for making such tablets (ASI, 16. plate 13, bottom).

Such are the usual Buddhist votive tablets. Others of a different class come from Sunet or Sunit in the Ludhiāna District, Punjab, mixed with similar tablets which are not Buddhist: these have been as yet only partially examined; but some good specimens have been figured in JRAS, 1901. 98, plate.

Of these Sunet seals, some bear simply the dedication: 'To Śaṁkara and Nārāyaṇa;' that is, to the gods Śiva and Vishṇu. Others, bearing that dedication on the reverse, present the name of the dedicator on the obverse; for instance: '(*An offering*) of the illustrious Vishṇudāsa' (loc. cit., No. 1). Others bear no dedication, but present simply the name of the offerer. These seem, from the devices on them, to be impressions from ordinary matrices of seals, made in order to be presented as votive offerings. And they are likely, therefore, to present names which may be historic. We have one (No. 3) which exhibits a horse, standing towards a sacrificial post, with the legend *parākrama*; this reminds us at once of the legend *aśvamēdha-parākrama*, 'he whose prowess, or whose title Parākrama, (*was established*) by performing the horse-sacrifice,' which stands on some of the coins of the Gupta king Samudragupta. Another (No. 7) exhibits a lion, seated, with a staff, resembling a combination of a spear and a trident, bound with ribbons, and the legend: 'Of the illustrious Sūryamitra.' A third (No. 10) exhibits a horse, prancing, and the legend: 'Of Dharmasēna.'

A large and highly interesting collection of clay seals, of the fourth and fifth centuries, has recently been found in the course of excavations made at Basāṛ, Basāṛh, in the Muzaffarpūr District, Bengal[1]: the total number of specimens is about 720, with somewhat more than 1,100 seal-impressions, exhibiting approximately 120 varieties. Here the bulk consists of seals of officials, guilds, corporations, etc.; of seals of private individuals; of seals of temples; and of seals with religious

[1] *Annual Report of the Archaeological Survey of India* for 1903-4. 101 ff., and plates 40 to 42.

legends on them. One, however, bears the legend: 'Of the illustrious Ghaṭōtkachagupta,' in which we can hardly avoid recognizing a mention of the father, called simply Ghaṭōtkacha in the inscriptions, of the Early Gupta king Chandragupta I. Three others bear legends which mention Dhruvasvāminī, called in the inscriptions Dhruvadēvī, wife of Chandragupta II, and give us Gōvindagupta as another son of that king. Others bear legends which mark them as having been issued at Vaiśālī. Others bear legends which include the territorial appellation Tīrabhukti, whence came the modern name Tirhūt. The legends on others presc t Tīra, evidently as the locality from which the territory derived its designation.

Quite recently, a smaller but highly interesting find of clay seals has been made near Kasiā in the Gōrakhpūr District. Amongst these we have some, referred to about A.D. 400 (JRAS, 1907. 365), which mention the Makuṭabandhana, the coronation-temple of the Mallas of Kusinārā at which (see ibid., 1906. 661) the corpse of Buddha was cremated, and others which speak of 'the community of friars, from the four quarters, at the Mahāparinirvāṇa,' i.e., at the scene of the Great Decease, which was at Kusinārā. And more lately still there has been found, at the same place, a seal-stamp, the legend on which mentions 'the community of friars at the Vishṇudvīpa (Veṭhadīpa) monastery.' These will be of considerable importance towards determining the identity of the remains in that neighbourhood.

A distinctly historical clay seal-stamp has come from Kāṭhiāwār, in the Bombay Presidency, but, of course, though it is a southern record, does not necessarily belong to that territory. The face of it is slightly oval, measuring about 2½ inches by 3 inches (IA, 12. 274); and it exhibits the sun and moon, and an inscription, incised in reverse in four lines, of which the purport is: '(*Seal*) of the prince and commander-in-chief Pushyēṇa, son of the illustrious prince Ahivarman, whose royal pedigree extends back unbroken to Jayaskandha.'

And we probably have another, but simpler, historical specimen, in a terra-cotta seal found at Bulandshahr, United Provinces, which presents (IA, 18. 289) the devices of a conch-shell and something which may be a nautilus or an ear shown in section, or a wing, or a conventional representation of a wheel, with the name Mattila, perhaps of a king who is mentioned as Matila in the Allahābād inscription of Samudragupta.

An inscribed terra-cotta image of Buddha, referred to the fifth century A.D., has been found near Kasiā, in the Gōrakhpūr District[1].

There are no indications that the use of brick for inscriptional purposes was ever at all general in India, as it was in some other eastern lands.

But at Bhitarī in the Ghāzīpūr District, United Provinces, there have been found numerous bricks, bearing the inscription 'the glorious Kumāragupta' (ASI, 1. 94, plate 30), with reference to either the first or the second Gupta king of that name, of the fifth century. And other inscribed bricks, of later date, have been found at Shōrkōṭ in the Jhang District, Punjab (ASI, 5. plate 30), stamped with apparently directions for the placing of them by the builders.

At Gōpālpūr in the Gōrakhpūr District, there have been found some brick tablets bearing Buddhist Sūtras (JASB, 65, 1896. proceedings, 99), one of which is a version in Sanskṛit of a short sermon preached by Buddha at Śrāvastī.

And a brick tablet, found in a field in the Jaunpūr District, United Provinces, bears an inscription (JASB, 19, 1850. 454), dated in A.D. 1217, which registers a mortgage of some lands as security for a loan.

3. Earthenware

Earthenware. Inscribed earthenware relic-receptacles have been found at Bhōjpūr near the well-known Sāñchi in the Bhōpāl State, Central India (C.BT, 331, 333, and plate 26; 335, 336, and plate 27, Nos. 4, 5), and at Andhēr in the same neighbourhood (ibid., 346, and plate 29, No. 5). And the first of these (331) is of some interest, because the inscription, recorded on its lid, which was coated with whitewash, was written with ink. Only traces of the letters, however, remain; no part of the record is decipherable.

Three earthenware jars, bearing inscriptions in Kharōshṭhī characters written in ink, have been obtained at the Pālāṭu-Ḍherī hillock in the neighbourhood of Chārsada, North-West Frontier Province[2]: the inscriptions record the gift of the jars to the local community of Buddhist monks.

And from Kāṭhiāwār we have a piece of earthenware, apparently a fragment of a huge pot, bearing an incised inscription

[1] *Progress Report of the Archaeological Survey*, Punjab and United Provinces Circle, 1904-5. 51.

[2] *Annual Report of the Archaeological Survey of India* for 1902-3. 163; see also the *Report* for 1903-4. 289.

(IA, 14. 75) which presents a date equivalent to A.D. 566–67, and the name of 'the glorious Guhasēna,' who was one of the Maitraka princes of Valabhī.

4. Stone

We come now to the great bulk of the inscriptions, those which were recorded on stone in some form or another. They are found on rocks; on isolated monolith columns and pillars, of which some were erected simply to bear the records that were published on them, others were placed in front of temples as flagstaffs of the gods, and others were set up as pillars of victory in battle; on relic-receptacles, hidden away in the interiors of Buddhist Stūpas; on external structural parts of Stūpas; on façades, walls, and other parts of caves; on pedestals and other parts of images and statues, sometimes of colossal size; on moulds for making seals; on walls, beams, pillars, pilasters, and other parts of temples; and on specially prepared slabs and tablets, sometimes built into the walls of temples and other erections, sometimes set up inside temples or in the courtyards of them, or in conspicuous places in village-sites and fields, where they have occasionally in the course of time become buried. **Stone.**

(*a*) Rocks

Amongst the inscriptions on rocks, the most famous ones are those at Shāhbāzgarhī in the Yūsufzai country, at Mansehra in the Hazāra District, North-West Frontier Province, at Kālsī in the Dehra Dūn District of the United Provinces, at Girnār (Junāgaḍh) in Kāṭhiāwār, at Dhauli in the Cuttack District of Orissa, and at Jaugada in the Gañjām District of the Madras Presidency (see, for instance, C.IA, plates 1 to 7, 9 to 12; Senart, *Inscriptions de Piyadasi*, 1; and IA, 9. 282; 10. 83, 180, 209, 269; EI, 1. 16; 2. 447; ASSI, 1. 114), which present, more or less completely, and in different recensions, one series of the edicts of Aśōka (264 to 227 B.C.), the fourteen 'rock-edicts,' as distinguished from the 'pillar-edicts.' In these inscriptions of both series we have proclamations on the subject of religion and morality, issued by Aśōka for the guidance of his subjects, and placed on record in conspicuous positions in or near towns, or close to highways frequented by travellers and traders, or in the neighbourhood of sacred places visited by pilgrims. The idea of publishing some of them on rocks was certainly suggested by a reminiscence of the proclamations issued in the same way by the great Persian king Darius. And it can hardly be doubted that other traces **Rocks.**

of the influence of the Persian occupation of the valley of the Indus in the time of Darius are to be recognized in the style of address adopted both in the rock-edicts and in the pillar-edicts:—'Thus saith the king, the Beloved of the Gods, He of gracious mien,' and in the characters, Kharōshṭhī or Kharōshṭrī, in which the Shāhbāzgarhī and Mansehra versions were drawn up and incised.

The most notable inscribed rock is probably that at Girnār, which contains, in addition to the edicts of Aśōka, a record, with a date in A.D. 150, of the Mahākshatrapa Rudradāman (EI, 8. 36), and a record, with dates in A.D. 455 to 457–58, of the Gupta king Skandagupta (F.GI, 56).

Amongst other noteworthy inscriptions on rocks, we have the record of Aśōka at Sahasrām, Rūpnāth, and Bairāt in Northern India (C.IA, plate 14; IA, 6. 149; 7. 141; 20. 154), and at Brahmagiri, Śiddāpura, and Jaṭiṅga-Rāmēśvara in Mysore (JA, 1892, 1. 472; EI, 3. 134), which is dated (see JRAS, 1904. 26) 256 years after the death of Buddha in 482 B.C.[1], and (see ibid., 355) somewhat more than thirty-eight years after the anointment of Aśōka to the sovereignty in 264 B.C., and was framed when, having abdicated, he was living in religious retirement, as a fully admitted member of the Buddhist order, at Suvarṇagiri, Sōngīr, one of the hills surrounding the ancient city Girivraja, in Magadha. Others are the duplicate inscriptions in Brāhmī and Kharōshṭhī characters at Kanhiāra and Paṭhyār in the Kāngṛa District, Punjab (ASI, 5. 175; EI, 7. 116); the record of the Western Chalukya king Pulakēśin II. at Yekkeri in the Belgaum District, Bombay (EI. 5. 6); and various inscriptions on the Chandragiri hill in Mysore (EC, 2. Inscriptions at Śravaṇa-Beḷgoḷa, Nos. 1 to 35), including the epitaph of the Jain teacher Prabhāchandra (EI, 4. 22), which commemorates also the migration of the Digambaras to Southern India, and their settlement at Śravaṇa-Beḷgoḷa.

(*b*) Columns and pillars

Columns and pillars.

On columns we have the famous seven 'pillar-edicts' of Aśōka, at Allahābād (C.IA, plate 22; IA, 13. 306; EI, 2. 245),

[1] There are probably few writers, if any, who would now care to maintain 543 B.C. as the date of the death of Buddha: that is simply a Ceylonese invention of about the twelfth century A.D. Dates proposed more recently are 477, 508, and 487 B.C. For the determination by the present writer of 482 B.C. as the closest approximation to the truth that we are likely to attain, see JRAS, 1906. 984 ff.

at Delhi (C.IA, plates 18 to 21, Senart, *Inscriptions de Piyadasi*, 2; and IA, 17. 303; 18. 1, 73, 105, 300; IA, 13. 306; 19. 122; EI, 2. 245), and at Radhia, Mathia, and Rāmpūrwa in the Champāran District, Bengal (EI, 2. 245). And amongst the records of that king, published in this way, a very interesting one is the inscription on the column at Rummindēī, in the Nepalese Tarai (EI, 5. 4), which locates the Lumbinīvana garden in which Buddha was born.

The most notable inscribed column is probably that at Allahābād, which bears, in addition to Nos. 1 to 6 of the 'pillar-edicts,' two short Aśōka records which are known as the Queen's edict and the Kōsambī edict (C.IA, plate 22; IA, 19. 123, 124), and also the record of Samudragupta incised at some time about A.D. 375 (F.GI, 1).

A few other specially noteworthy inscriptions on columns and pillars are the following. At Ēraṇ in the Sāgar District, Central Provinces, we have the record of Budhagupta of A.D. 484 (F.GI, 88), invaluable because the full details of the date presented in it helped to enable us to determine the exact commencement of the Gupta era. At Mandasōr in Mālwā, we have on two battle-columns or columns of victory the record of Yaśōdharman (F.GI, 142, 149), who conquered the great foreign invader Mihirakula, and swept away the last remnant of the Gupta sovereignty. At Tāḷgund in Mysore, we have the record that recites the rise of the Kadamba dynasty of Western India (EI, 8. 24). From Mahākūṭa in the Bijāpur District, Bombay, we have the record, dated in A.D. 602, of the Western Chalukya king Maṅgalēśa[1] (IA, 19. 7; and see 32. 213). At Paṭṭadakal, in the same District, we have the duplicate record, in Nāgarī and Old-Kanarese characters, incised in A.D. 754, of the Western Chalukya king Kīrtivarman (EI, II. 3. 1). And at Śravaṇa-Beḷgoḷa, in Mysore, we have the epitaphs of the great Western Gaṅga prince Noḷambāntaka-Mārasiṁha, incised about A.D. 975 (EI, 5. 151), and of the Jain teacher Mallishēṇa, incised about A.D. 1129 (EI, 3. 184).

(c) Relic-receptacles

Amongst the inscriptions on relic-receptacles from the interiors of Buddhist Stūpas, we have most notably the record on the steatite or soapstone vase from Piprahwa (JRAS, 1906. 149; 1907. 105),—the oldest known Indian record, deposited perhaps within a century after the death Relic-receptacles.

[1] The pillar bearing this record stands now in the compound Government Museum at Bijāpur.

Buddha,—which locates Kapilavastu, the paternal home of the great Teacher.

From the Stūpa No. 3 at the well-known Sāñchi in the Bhōpāl State, Central India, we have two steatite caskets which bear in ink, on the inner surfaces of the lids, in one case the letter *Sa*, and in the other case the letter *Ma* (C.BT, 299, and plate 22). They were found inside two boxes, apparently of ordinary stone, each bearing on its lid an incised inscription (C.BT, 297, and plate 22) to the following purport, explaining the initials: in one case: '(*Relics*) of Sāriputa;' in the other case: '(*Relics*) of Mahā-Mogalāna.' Here we have memorials of Sāriputta-Upatissa, and of Moggallāna-Kōlita, otherwise known as Mahā-Moggallāna, the two chief disciples of Buddha. Other relics of the same persons were deposited in inscribed steatite caskets in the Stūpa No. 2 at Satdhāra in the same neighbourhood (C.BT, 324, and plate 25, Nos. 4, 5).

From the Stūpa No. 2 at Sōnāri in the same neighbourhood, we have steatite vases bearing inscriptions (C.BT, 121, 317, and plate 24; and see JRAS, 1905. 681), of which the purport is as follows: in one case: '(*Relics*) of the sainted Kotīputa-Kāsapagota, the teacher of all the Himavat region;' and in another case: '(*Relics*) of the sainted Koḍiniputa-Majhima.' And from the Stūpa No. 2 at Sāñchi, we have an inscribed steatite casket containing relics of the same two persons, and of a third named Hāritīputa; and here, again, the record marks Kāsapagota as the teacher of all the Himavat region. The records are of extreme value in corroborating the account, given in the Buddhist books, of missions which were sent by the great priest Moggaliputta-Tissa, in the time of Aśōka, to establish the Buddhist faith in border-countries. And they are of particular interest in supporting, against the assertions of Buddhaghōsha in his Samantapāsādikā and of Mahānāma in the Mahāvaṁsa, the earlier statement of the Dīpavaṁsa, 8. 10, that the leader of the mission to the Himālayas was the Thēra Kassapagotta, and that Majjhima was only one of the companions sent with him.

Another steatite casket from the same deposit in the Sāñchi Stūpa No. 2 bears three inscriptions (C.BT, 289, and plate 20, No. 4), of one of which the purport is: '(*Relics*) of the sainted Mogaliputa.' Here, it can hardly be doubted, we have a memorial of the great Moggaliputta-Tissa himself, who has been mentioned just above. And we find another memorial of him in the inscription on a steatite vase from the Stūpa

No. 2 at Andhēr in the same neighbourhood (C.BT, 347, and plate 29, Nos. 8, 9), of which the purport is: '(*Relics*) of the sainted Mogaliputa, pupil of Gotiputa.' We have a memorial of Gotiputa on the same steatite casket from the Sāñchi Stūpa No. 2, mentioned just above, which bears the record of the relics of Moggaliputta.

From Andhēr we have, from the Stūpa No. 3, a steatite casket which bears two inscriptions (C.BT, 349, and plate 30, No. 6). One, incised on the outside, is to the purport: '(*Relics*) of the sainted Hāritīputa.' The other, of special interest because it was written in ink on the inside of the lid, is to the purport: 'The gift of Asadēva.'

The Bhaṭṭiprōlu Stūpa yielded also three inscribed stone relic-receptacles (ASSI, 6. plate 3), bearing nine short records (VOJ, 6. 148; EI, 2. 323). Two of the inscriptions mention a king whose name appears both as Kubiraka and as Khubiraka; and two of the others speak of relics of Buddha. A special interest attaches to these nine records, in that they exhibit some very exceptional palaeographic peculiarities, in a variety of the alphabet, referred to approximately the period 225 to 200 B.C., which is not met with elsewhere.

(*d*) External parts of Stūpas

Amongst the inscriptions recorded conspicuously on external parts of Stūpas, we may mention, in the first place, the record on a pillar of the eastern gateway of the Stūpa at Bharhut in the Nāgōd State, Central India (C.SB, plate 12; IA, 14. 138; 21. 227), which registers the fact that the *tōraṇa* or ornamental arched part of the gateway was caused to be made, and the completion of the masonry work was effected, by Vāchhiputa-Dhanabhūti, son of Gotiputa-Agaraju, son of the king Gāgīputa-Visadēva. This record is of special interest because it further refers itself to the time of the sovereignty of the Śuṅgas; it gives us the only known inscriptional record of that dynasty, which the Purāṇas place next after the great Maurya dynasty of Chandragupta and Aśōka. External parts of Stūpas.

From the upper architrave of the southern gateway of the Sāñchi Stūpa No. 1, we have an inscription (C.BT, plate 19, No. 190) which mentions Siri-Sātakaṇi, one of the early kings of the Deccan and Central India.

From other external parts of the same Stūpa and the second one at the same place, we have a number of short records, registering gifts of various parts of the buildings (EI, 2. 87, 366), which, mentioning the places of abode of the donors,

carry back to very early times various cities and towns which still exist, and still play their part in current events.

In the inscriptions on the pillars, rails, and copings of the Bharaut Stūpa (IA, 21. 225), we have a larger variety of records.

Some of them, donative records of the same nature with those at Sāñchi, are similarly useful in the geographical line. And three of them (loc. cit., Nos. 95, 134, 144) are of importance in showing that the Buddhist canon had already, in the second or first century B.C., divisions known by the names of the Piṭaka, the Sūtrānta, and the Five Nikāyas.

Others, not of that class, but descriptive of the sculptures to which they are attached, are valuable in other directions. Some (C.SB, plates 25 to 27) carry back to the same period some of the Jātakas, the stories of the previous existences of Buddha in various forms. Three of them mention ancient kings (IA, 21. 227, Nos. 20, 58, 77): Janaka, with queen Sivaladēvī (C.SB, plate 44, top); Pasēnaji, of Kōsala (plate 13, right); and Ajātasatu, represented in the act of performing worship to Buddha (plate 16, right). One of them marks an illustration (C.SB, plate 13, left) of the *bōdhi*-tree of the last Buddha, Sakamuni; i.e., of the tree under which he was sitting when he attained perfect knowledge, enlightenment as to good and evil. Others mark sculptures (C.SB, plate 29, and 30, No. 1) of the *bōdhi*-trees of some of the previous Buddhas, whose names they present as Vesabhu, Konāgamena, Kasapa, Vipasin, and Kakusadha.

Amongst miscellaneous records, a notable inscription stamps a medallion (C.SB, plate 34, No. 2) as representing Mahadēva rescuing Vasuguta from the belly of a sea-monster; the scene shows Mahadēva seated with two companions in a boat over the sea-monster, an enormous fish, which is disgorging another boat containing Vasuguta and two attendants. Another stamps a panel (C.SB, plate 16, centre) as exhibiting the angel Arahaguta announcing to the great assembly the future conception of Buddha. Another marks a medallion (C.SB, plate 28, top, right) as showing the dream of Māyā, the mother of Buddha, in which she saw her future son about to enter into her womb in the form of a white elephant. Another marks a medallion (C.SB, plate 57) as illustrating the gift of the Jētavana park to the Buddhist community by Anādhapeḍika; the scene shows his servants putting down the layer of a crore of coins with which he purchased the site (see Vinayapiṭaka, 2. 159; Jātaka, 1. 92). Others record the names

of statues of gods and goddesses, nymphs of heaven, celestial attendants, and other beings, and help much in the department of Buddhist mythology.

From the remains of a Stūpa at Muttra we have the lion-capital, covered with records, in intrusive Kharōshṭhī characters (JRAS, 1894. 525; 1904. 703; 1905. 154), which establish a temporary occupation of that part of India, just after the time of Huvishka, by a power from the north-west which was represented at Muttra by the governors Rajula-Rājuvūla and his son Śuḍasa-Śoḍāsa. And, from a rail outside the eastern gate of the Sāñchi Stūpa No. 1, we have an inscription (F.GI, 29) which gives us a date in A.D. 412 for the Gupta king Chandragupta II.

(*e*) Caves

Amongst the inscriptions on façades, walls, and other parts of caves, we have at the Bārābar and Nāgārjunī Hills in the Gayā District, Bengal (ASI, 1. 47, plate 20; C.IA, plate 16; IA, 20. 361), other records of Aśōka, and some of a king Daśaratha who according to the Vishṇu-Purāṇa was a grandson of Aśōka. Caves.

From the Hāthigumphā cave near Cuttack in Orissa, we have the record of king Khāravēla of Kaliṅga (see page 14 above), which belongs to 156–55 B.C. if it is really dated, as has been held, in the year 165 of the time of the Maurya kings.

From a cave at the Nānāghāṭ Pass in the Poona District, Bombay, we have the record of queen Nāyanikā, wife of one of the Sātavāhana-Sātakaṇi kings (PSOCI, No. 265; ASWI, 5. 6).

And from caves at Nāsik, Junnar, and Kārlē, we have the valuable records (ASWI, 4. 98 to 114; EI, 7. 56, 57, 61, 71; 8. 59 ff.) of the Kshaharāta king Nahapāna and his son-in-law Ushavadāta, and of Gōtamīputa-Sātakaṇi and his son Vāsiṭhīputa-Puḷumāyi, which throw so much light on the history of Western India in the first and second centuries A.D.

(*f*) Images and Statues

Amongst inscriptions on pedestals and other parts of statues and images, we may mention, as being either typical instances or otherwise of special interest, the record of a king or prince named Turāmala, dated in A.D. 7 or 8, on the base of a colossal statue of Buddha at Bōdh-Gayā (C.MG, plate 25); the record, dated in A.D. 22, on the base of a statue of the Jain Tīrthaṁkara Ara at Muttra (EI, 2. 321); the record, dated in A.D. 328, on the pedestal of a statue of Buddha at Hashtnagar in the Images and statues.

Peshāwar District (JASB, 58, 1889. 144; IA, 18. 257; 20. 394); the record of the time of Kumāragupta I, dated in A.D. 448, on the pedestal of an image of Buddha at Mankuwār in the Allahābād District (F.GI, 45); the record of the Mahārāja Bhīmavarman, dated in A.D. 458–59, on the base of a sculptured group of Śiva and Pārvatī at Kōsam near Allahābād (F.GI, 266); the record of the time of the foreign invader Tōramāṇa, the father of Mihirakula, on the colossal boar at Ēraṇ in the Sāgar District (F.GI, 158); the record of the Sthavira Mahānāma, on the pedestal of an image of Buddha at Bōdh-Gayā (F.GI, 278); and the record of the time of Ādityasēna, dated in A.D. 672, on the pedestal of an image of the sun at Shāhpūr in the Patna District (F.GI, 208).

There are some notable inscribed colossal statues of the Jain saint or god Bāhubalin or Bhujabalin, otherwise called Gummaṭa or Gommaṭēśvara, at Śravaṇa-Beḷgoḷa in Mysore, and at Kārkaḷa and Vēṇūr in the South Kanara District, Madras (EI, 7. 108 ff., and plates). But, while the statue at Śravaṇa-Beḷgoḷa dates from the period A.D. 977 to 984, the other two date only from A.D. 1432 and 1604 respectively.

Another noteworthy object in this class is the colossal statue found near Kasiā in the Gōrakhpūr District, United Provinces (ASI, 18. 57, and plate 5; 22. 17), which represents Buddha dying, and bears on a part of its pedestal an inscription (F.GI, 272) which is referable to about the end of the fifth century A.D.

(g) Moulds for making Seals

Moulds for making seals. In the way of moulds or stamps for making seals, we must mention first some objects from Harappa in the Montgomery District, Punjab, of which two have been figured (ASI, 5. plate 33, No. 1; C.IA, plate 28; IA, 15. 1). They present legends in some characters the clue to the decipherment of which has not yet been obtained.

From a place which has come to be known as Sankīsā, or more fully Sankīsā-Basantpur, in the Farrukhābād District, United Provinces, we have a steatite or soapstone seal-stamp (ASI, 11. plate 9, No. 1), which presents the name Utarasēna, incised in reverse, with some emblem above it the nature of which is not apparent, and, below it, a *svastika* or square cross with four arms. And it may be added that from the same place we have a goldsmith's mould, also made of steatite (ibid., No. 6), bearing three Kharōshṭhī characters which seem to give a word in the genitive case: here the letters are not reversed, and they stand on the flat surface surrounding the hollow

containing the pattern which was to be reproduced from the mould; they seem, therefore, to give the name of the owner of the mould.

In this line, however, the chief curiosity is the rock-cut seal-matrix, of about the commencement of the seventh century, at Rōhtāsgaṛh in the Shāhābād District, Bengal (F.GI, 283; and see C.MG, plate 27, G, for an illustration of the original as it actually stands, in reverse). This matrix exhibits a bull couchant, and below it a legend, of which the purport is: '(*Seal*) of the illustrious Mahāsāmanta Saśāṅkadēva.' The device and the legend are surrounded by a circle, about 4½ inches in diameter, marking the size of any impressions to be produced from it. And in the original the legend is in reverse, and, with the device, it is carved in the rock, not carved in relief. We plainly have here a matrix or mould for making seals. It is, however, difficult to imagine that so friable a substance as rock would stand having molten metal poured into it, and would remain unhurt. It would seem, either that some very soft metal must have been used, which could be forced into the mould in almost a cold state, or else that the mould was made for the purpose of producing a clay, lac, or wax seal.

Limitation of space precludes us from illustrating any more the various positions and circumstances in which the inscriptions on stone are found. And, for the same reason, we cannot enter here into a description of the sculptured devices, religious, dynastic, and of other kinds, which accompany a few of them in Northern India, and a large number of them in the South: these sculptures are of considerable interest in their own line; but they have not the particular importance which attaches to the seals of the copperplate records. We must pass on to our next division of the general subject.

IV. The Topics of the Inscriptions, and the Reasons for which they are Historically so Useful

We have considered the inscriptions according to the substances on which they were recorded. We have now to examine the nature of them according to the purport of their contents; especially with the object of showing precisely why they are of such importance from the historical and chronological point of view.

The topics of the inscriptions, and the reasons for which they are historically so useful.

A. Plain Statements of Events

Plain statements of events.

In classifying the inscriptions for this purpose[1], we may take first those of them which are plain statements of events, sometimes perhaps containing allusions to religion and to donations, but not specially directed to any such ends. In this class one of the best instances of purely historical narrative is the Hāthigumphā cave-inscription, already referred to (page 14 above), which summarizes the career of Khāravēla of Kaliṅga as far as the thirteenth year of his reign, and presents to us a chapter, or the beginning of a chapter, of a dynastic chronicle. Another is the eulogy of Samudragupta on the Aśōka column at Allahābād (F.GI, 1), which recites his pedigree, describes his conquests in Northern India, mentions some of the foreign tribes with which he had relations, and gives us a considerable insight into the political divisions of Southern India. A third is the short poem, in grand diction, given in duplicate on the two columns of victory at Mandasōr (F.GI, 142, 149), which describes the triumphs of Yaśōdharman, including the humbling of the great foreign invader Mihirakula 'who had never before that bowed his head in obeisance to any save the god Śiva.'[2]

To the same class we may refer some of the records of the carrying out of public works. Here we have the two fine rock-inscriptions at Junāgaḍh (EI, 8. 36; F.GI, 56), which record the repairing of the embankment of the great lake Sudarśana

[1] There are five epigraphs, of a quite exceptional nature, which cannot be placed in any of the following categories, and in fact hardly come under the heading of 'inscriptions' as defined on page 1 above, but which must not be left unnoticed.

From stones at Ajmēr we have fragments of two otherwise unknown plays. One of these plays, entitled Lalitavigraharājanāṭaka, was composed by a poet Sōmadēva in honour of the Chāhamāna king Vigraharāja. The other, entitled Harakēlināṭaka, was composed by Vigraharāja himself. These fragments have been edited by Professor Kielhorn in IA, 20. 201 ff., and in *Festschrift der Königlichen Gesellschaft der Wissenschaften zu Göttingen*, 1901.

From a stone at Dhār, in Central India, we have the first two acts of an otherwise unknown play by Madana, entitled Pārijātamañjarī or Vījayasrī, of which the hero is the Paramāra king Arjunavarman. These have been edited by Professor Hultzsch, in EI, 8. 96 ff., and separately.

And from other stones at Dhār we have two Prākṛit poems, odes to the tortoise incarnation of Vishṇu, written in honour of king Bhōja. These have been edited by Professor Pischel, in EI, 8. 241 ff.

[2] Something of the same kind—at any rate, a firm resolve to that effect from childhood upwards—is claimed in the Harshacharita for Bhāskaravarman, king of Prāgjyōtisha: see the translation by Cowell and Thomas, 217; Kashmīr text, 460.

in the time of Rudradāman, and again in the time of Skandagupta; the former of them reciting, also, how the lake was originally made by a governor of the great Maurya king Chandragupta, and had been embellished by a governor of Aśōka. And here we have also the Tālgund inscription (EI, 8. 24), which, directed primarily to recording the construction of a great tank, recites, by way of introduction, the origin and rise to power of the early Kadamba dynasty of Banawāsi.

To the same class belong some of the epitaphs: for instance, the charming short poem on the iron pillar at Meharaulī (F.GI, 139), which preserves the memory of the great Gupta king Chandragupta II; the panegyric of the great Western Gaṅga prince Noḷambāntaka-Mārasiṁha at Śravaṇa-Beḷgoḷa (EI, 5. 151); and the epitaphs of the Jain teachers Prabhāchandra and Mallishēṇa at the same place (EI, 4. 22; 3. 184).

In the same class we have some of the monumental pillars and tablets commemorating the death of heroes in battle. Here we may cite the small pillar at Ēraṇ (F.GI, 91), which gives us the name of king Bhānugupta, as a preliminary to recording how his follower Gōparāja died in fight, and how Gōparāja's wife accompanied his corpse onto the funeral pyre. And other instances are found in the *vīrgals* or 'hero-stones of Central India, Bombay, and Madras, as illustrated by the Tērahi stones (IA, 17. 201), which recite how Chāṇḍiyaṇa, the governor of a fortress under Guṇarāja, was killed in a fight between Guṇarāja and Undabhaṭa; by the Ablūr stone (EI, 5. 261), which commemorates the death of the brothers Mācha and Gōma, fighting valiantly on the occasion of a cattle-raid against their village; and by the Kīḻ-Muṭṭugūr, Āmbūr, Naregal, and Baṅgavādi tablets (EI, 4. 178, 182, 183; 6. 162; 7. 22), which preserve the memory of other heroes killed on occasions of the same kind.

In the way of more miscellaneous records referable to this same class, we have the Sōhgaurā plate (JRAS, 1907. 509), containing a public notification of the establishment of two storehouses, at the junction of three great highways of vehicular traffic, to meet any emergent needs of persons using those roads; the Mandār Hill rock-inscriptions (F.GI, 211), which record the construction of a tank by the order of Kōṇadēvī, the wife of king Ādityasēna; and the Bhumarā pillar (F.GI, 110), which was set up as a boundary-mark between the territories of the Mahārāja Hastin and the Mahārāja Śarvanātha, and the record on which enables us to synchronise the families to which those two princes belonged.

And here we may mention also another stone at Kīḻ-Muṭṭugūr (EI, 4. 179), which marks the spot on an embankment at which a local hero killed a tiger; the Kōṭūr inscription (IA, 20. 69), which narrates how a Śaiva ascetic immolated himself in the fire; and the Beḷatūru inscription (EI, 6. 213), which tells the pathetic tale of how, in spite of the remonstrances of her parents and her relatives, the wife of a local governor entered the flames, to accompany her dead husband to the world of the gods.

In the same class we may notice two inscriptions at Śīyamaṅgalam and Tiruvoṭṭūr[1], which give an interesting insight into the administration of criminal law in the twelfth century. One of them recites how a certain individual by mistake shot a man belonging to his own village; whereupon, the governor and the people of the district assembled together, and decided that the culprit should not die for the offence committed by him through inadvertence, but should burn a lamp in the Tūnāṇḍār temple at Śīyamaṅgalam; and accordingly he provided sixteen cows, from the milk of which ghee was to be prepared, to be used in burning the lamp. The other records that a man went hunting, and missed his aim, and shot another man; whereupon, the people of the district assembled, and decided that the culprit should make over sixteen cows to, apparently, the Tiruvoṭṭūr temple.

We may further include here two inscriptions at Cheṅgama[2], which embody political compacts of alliance for purposes of offence and defence. And, though it does not contain any narrative, we may conveniently note here the seal-matrix of Śaśāṅka, cut in the rock at the hill-fort of Rōhtāsgaṛh (see page 49 above),—a mould for casting seals to be issued by him,—which, by its existence there, locates in that direction the kingdom of Kie-lo-na-su-fa-la-na mentioned by the Chinese pilgrim Hiuen-tsiang.

B. Records due to Religious Motives

Records due to religious motives.

For practically all such records as those mentioned in the preceding paragraphs, we are indebted to an historical instinct which found expression more or less fully in them. And some of them illustrate how well the ancient Hindūs could put together brief historical narratives, concise and to the point,

[1] See the *Annual Report of the Government Epigraphist*, 1899-1900. 11, para. 26.
[2] See ibid., 13, paras. 32, 33.

but limited in scope. But the records of that class, though fairly numerous in themselves, are but few in number in comparison with the others that we have yet to deal with. For the great bulk of the epigraphic materials that have come down to us, we are indebted, not to any historical instinct of the Hindūs, but to the religious side of their character, and to their desire for making endowments on every possible occasion.

In the class of inscriptions to which we have now come, we may take first those for which we are indebted to religious motives alone. And, amongst them, we may notice first those which were directed to the propagation of religion and morality. Here, however, we can bring forward prominently only some of the records of Aśōka.

We have, in the first place, his well-known rock and pillar edicts (see pages 41, 42, above), scattered about at various places of importance in his dominions and in other territories that were more or less subject to his influence, from Shāhbāzgarhī in the Yūsufzai subdivision of the Peshāwar District on the north to Śiddāpura in Mysore on the south, and from Dhauli in the Cuttack District and Jaugada in the Gañjām District on the east to Girnār (Junāgaḍh) in Kāṭhiāwār on the west. The object of them was to proclaim the firm determination of Aśōka to govern his realm righteously and kindly in accordance with the duty of pious kings, and with considerateness for even religious beliefs other than the Brāhmaṇical faith which he himself at first professed, and to acquaint his subjects with certain measures that he had taken to that end, and to explain to them how they might co-operate with him in his objects. But, in addition to mentioning the contemporaneous foreign kings Antiochus I. or II. of Syria, Ptolemy Philadelphus of Egypt, Antigonus Gonatas of Macedonia, and Magas of Cyrene, they yield items of internal history, in detailing some of Aśōka's administrative arrangements; in locating the capital of his empire at Pāṭaliputra (Patna), and seats of viceroys at Ujjēni (Ujjain) and Takhasilā (Taxila); in giving the names of some of the leading peoples of India, particularly the Chōḷas, the Pāṇḍyas, and the Andhras; and in recording the memorable conquest of the Kaliṅga country, the attendant miseries of which first directed the thoughts of the king to religion and to solicitude for the welfare of all his subjects.

To these we must add that record of Aśōka, extant in various versions in Northern India and in Mysore (see page 4[illegible]

above), which was framed and issued when he had been converted to Buddhism and had been led to formally join the Buddhist order, and when, having taken the vows of a monk, he had abdicated, and was spending his remaining days in religious retirement in a cave-dwelling on Suvarṇagiri (Sōngīr), one of the hills surrounding the ancient city of Girivraja in Magadha (Bihār). This record was issued to proclaim Buddhism as the true religion, and Buddha, 'the Wanderer,' the ascetic teacher exiled by his own choice from the house-life into the houseless state, as the great exponent of it. And it has its historical value in the fact that it was framed (see JRAS, 1904. 26, 355) when 256 years had elapsed after the death of Buddha, and 38 years after the anointment of Aśōka to the sovereignty, and, it may be added, on the first anniversary of his abdication. It thus confirms exactly, and carries back to the time of Aśōka himself, the statement of the Ceylonese chronicle the Dīpavaṁsa, that 218 years intervened between the death of Buddha and the anointment of Aśōka. Corroborating the Dīpavaṁsa in that important matter, it enables us to accept with considerable confidence the historical details given for the intervening period by the same chronicle. And it enables us to determine (see JRAS, 1906. 984 ff.), with due regard to all the considerations that have to be harmonized, and to put forward as the closest approximations that we are likely to attain, 482 B.C. for the death of Buddha, alongside of 320 B.C. for the foundation of the Maurya sovereignty by Chandragupta, and 264 B.C. for the anointment of Aśōka.

To religious motives alone, in the form of the desire to honour the memory of saints and teachers by enshrining relics of them, we owe the records on relic-caskets of Kotīputta-Kassapagotta and Koḍinīputta-Majjhima and Gotīputta-Dundubhissara, from Sāñchi and Sōnārī (see JRAS, 1905. 681, 685, 687), which confirm in so important a manner the account given in the Dīpavaṁsa of the missions that were sent out by the great priest Moggaliputta-Tissa, in the time of Aśōka, to establish the Buddhist faith in the border-lands.

Similarly, to the desire to honour in another way the memory of a dead teacher we owe the Rummindēī pillar-inscription of Aśōka (EI, 5. 4), which is of such interest because it localizes the Lumbinīvana garden, the place of Buddha's birth. The record, framed when Aśōka was twenty-years-anointed, and before his conversion to Buddhism, tells us that he did the place the great honour of visiting it in person, evidently in the course of some tour of inspection or

state-progress through the north-eastern parts of his dominions; and it proceeds to recite that, because Buddha, 'the Sakya saint,' was born there, the king built a stone enclosing and screening wall round the place, and set up a stone column (the one which bears the record), and made the village Lumminigāma free of certain taxes.

So, again, to the installation of relics of Buddha we are indebted for the inscriptions of about A.D. 15 on the Muttra lion-capital (JRAS, 1894. 525; 1904. 703; 1905. 154), which, amongst other items of information, mention the Satraps Rajula-Rājuvūla and Śuḍasa-Śoḍāsa; and for the record on the Sir-Sukh or Taxila plate (EI, 4. 54), which gives us a date in A.D. 22 for the Satrap Patika.

And to another development of the same desire we are indebted for the oldest known Indian record, the inscription on the Piprahwa relic-vase (see page 43 above), which was directed to preserving the memory of the kinsmen of Buddha, the Sakyas of tradition, who were ruthlessly massacred, men, women, and children, by Viḍūḍabha, king of Kōsala, and which locates for us the city Kapilavastu, the home of Buddha in his childhood, youth, and early manhood.

We owe the record (IA, 14. 138; 21. 227) which proves the historical existence of the dynasty of the Śuṅgas, to the building of a gateway of the Stūpa at Bharaut. And we owe the Kura inscription of Tōramāṇa (EI, 1. 238) to the erection of a Buddhist monastery.

We owe the Nānāghāṭ inscription, of the Sātavāhana-Sātakaṇi series (ASWI, 5. 60), to the desire to commemorate the great sacrifices that had been celebrated, and the costly sacrificial fees that had been given, by queen Nāyanikā.

For the inscription of Tōramāṇa on the breast of the stone boar at Ēraṇ (F.GI, 158), which establishes his conquest of Central India, we are indebted to the building of the temple, in the portico of which the boar stands. And to the same motive we are indebted for the Gwālior inscription of his son Mihirakula (F.GI, 161), and for the Aihoḷe inscription of Pulakēśin II. (EI, 6. 1), which contains a great deal of important historical and geographical matter, and for the Vaḷḷimalai inscription (EI, 4. 140), which settles the first four generations of the family of the Western Gaṅga princes of Taḷakāḍ.

It is to the restoration of a temple that we are indebted for the important Mandasōr inscription (F.GI, 79), which gave us what had so long been wanted, namely, a date for one of the Early Gupta kings, recorded in an era, capable of identi-

fication, other than that which was specially used by them in their own records. And we owe another important record of the Early Guptas, the Ēraṇ pillar-inscription (F.GI, 88), which gives us the name of Budhagupta and one of the dates which helped to fix the exact initial point of the Gupta era, to the erection of the column as the 'flagstaff' of the god of the temple in front of which it stands.

To the installation of an image of the Jain saint Vardhamāna, we owe the Muttra inscription (EI, 1. 381; IA, 1904. 34, No. 4), which gives us a date in the year 5, falling in 53 B.C., for Kanishka. To the installation of an image of a Bōdhisattva we owe another record from the same place (IA, 1904. 39, No. 9), which gives us a date in the year 33, in 24 B.C., for Huvishka; and for another record (JBBRAS, 20. 269), which gives us a date for the same king in the year 45, in 12 B.C., we are indebted to the installation of an image of Buddha. To the installation of another image of a Bōdhisattva we owe the record from the place known as Sēt-Mahēt (EI, 8. 180), which seems to give conclusive evidence as to the position of the ancient city Śrāvastī. And we owe the Shāhpur inscription (F.GI, 208), which gives us a date for king Ādityasēna, recorded in the Harsha era and falling in A.D. 672–73, to the installation of an image of the Sun.

The Takht-i-Bahaī inscription of Gondophernēs, of A.D. 47 (see page 5 above), so interesting in view of the corroboration which it gives to the Christian tradition of the mission of St. Thomas the Apostle to the east, was recorded to register some pious act performed, in memory of his parents, by the person for whom the record was drawn up.

To the building of a temple of the Sun, under the name Chaṇḍasvāmin, we are indebted for the Dhōlpūr inscription of A.D. 842 (ZDMG, 40, 1886. 39), which, in specifying its date in the era of 58 B.C. as the year 898 of 'the time called *vikrama*,' in the sense of a reckoning of years commencing in the autumn, which was the 'war-time,' the season for undertaking campaigns, gives us the earliest known instance of the use of the precise term from which there was evolved the legend (see page 4 above, and note 2) that the era was founded by a king named Vikrama.

A dispute between two priests, each of whom claimed the ownership of a particular plot of land for his god, has given us an interesting record of a trial by ordeal in an inscription at Kittūr (JBBRAS, 9. 307).

The settlement of a sectarian dispute has given us a

record (EC, 2. Inscriptions at Śravaṇa-Belgoḷa, No. 136) which narrates how king Bukkarāya of Vijayanagara brought about a reconciliation between the Jains and the Vaishṇavas of Śravaṇa-Belgoḷa, and embodies a compact under which the Jains were to enjoy equal freedom and protection with the Vaishṇavas in respect of their rites and processions.

The necessity for reforming the sacred law on a certain point has given us an inscription at Viriñchipuram (H.SII, 1. 82), embodying an agreement fixing the law of marriage among the Brāhmaṇs of the Paḍaivīḍu country, by which they bound themselves that marriages among their families should only be concluded by *kanyādāna*, that is to say, by the father giving his daughter gratuitously, and that any father accepting money, and any bridegroom paying money for his bride, should be subject to punishment by the king and excommunication from caste.

The desire of pilgrims to commemorate their visits to sacred sites has given us a number of records at Sāñchi (EI, 2. 87, 366) and at Bharaut (IA, 21. 225), which are of considerable value in the geographical line of inquiry.

And the presentation of caskets to hold relics of Buddha has disclosed to us, in the inscriptions found at the Bhaṭṭiprōlu Stūpa (see page 45 above), a peculiar variety of the Brāhmī alphabet, which has not been met with elsewhere, and which has an important bearing on the development of the art of writing in India.

C. Records of Religious Endowments

We come next to those inscriptions of which the object was to register donations and endowments made to gods, to priests on behalf of temples and charitable institutions, and to religious communities. Records of religious endowments.

The inscriptions of Aśōka, and of a king Daśaratha who according to the Purāṇas was his grandson, which are found in the caves on the Barābar and Nāgārjunī Hills (IA, 20. 361), were engraved to record the presentation of the caves to a community of Ājīvika ascetics.

The Nāsik inscription of Ushavadāta, son-in-law of the Kshaharāta king Nahapāna, dated in the year 42, in A.D. 120 (ASWI, 4. 102, No. 9; EI, 8. 82), was engraved to register the presentation of the cave, with endowments in money and with the gift of a coco-nut tree plantation, to a community of Buddhist monks.

The object of the Bhitarī pillar-inscription of Skandagupta (F.GI, 52), and of the Kūram grant of Paramēśvaravarman I.

(H.SII, 1. 144), was to register grants of villages to gods; in the first case to Vishṇu, and in the second case to Śiva.

The Indōr record of the time of Skandagupta, dated in A.D. 466 (F.GI, 68), was issued to record an endowment to provide oil for the lamp of a temple of the Sun.

Some of the charters of the early Kadamba kings of Banawāsi (IA, 6. 24 ff.; 7. 33 ff.) were issued to convey lands and villages to the god Jinēndra, and to members of various Jain sects for the maintenance of the worship of that god.

The object of the Kaluchumbaṟṟu grant of the Eastern Chalukya king Amma II. (EI, 7. 177) was to convey that village to a Jain teacher for the purposes of a charitable dining-hall of a Jain temple.

The principal record on the Ātakūr stone of A.D. 949–50 (EI, 6. 50) registers a grant of some land to a temple of Śiva, made in celebration of a fight between a hound named Kāḷi and a great wild boar, in which, while the hound slew the boar, the hound itself was killed.

The Cochin grant of Bhāskara-Ravivarman (EI, 3. 66), which establishes the existence of a colony of Jews in that part of India, was issued to record the bestowal of a village on the Jews, with the right to use certain religious paraphernalia.

But for the fact that the ultimate object of it was to register the names of the villages that were granted to Ēkāntada-Rāmayya for the purposes of a temple that he built, we should not have had the Ablūr inscription (EI, 5. 237; and see IA, 1901. 2), which discloses the real originator of the movement, in the twelfth century, that led to a local development of Śaivism, with renewed vigour, which resulted in the establishment of the sect of the Liṅgāyats or Vīra-Śaivas which occupies so prominent a position in the Belgaum, Bijāpūr, and Dhārwār Districts and in the northern parts of Mysore.

And so on with innumerable other instances, in which history has been recorded only as an incidental matter, in connexion with the primary topic of religious benefactions.

D. Records of Secular Donations

Records of secular donations.

Finally, we have the inscriptions which register secular grants, not in any way connected with religion, to private individuals. As a few instances here, we may cite the following.

The Halsī record of the Kadamba king Kākusthavarman (IA, 6. 23) registers the grant of a field, as a reward for saving his life, to a Sēnāpati or general named Śrutakīrti.

On the other hand, in recognition of an equally useful but

less laudable service the supplementary inscription on the Ātakūr stone of A.D. 949–50 (see page 58 above) records that the Rāshṭrakūṭa king Kṛishṇa III. gave to the Western Gaṅga prince Būtuga II. the Banavase twelve-thousand province, and the districts known as the Beḷgoḷa three-hundred, the Purigeṛe three-hundred, the Kisukāḍ seventy, and the Bāgenāḍ seventy, as a reward for (so the record itself says) treacherously slaying the Chōḷa king Rājāditya in the act of embracing him in pretended friendship.

The Maḷavaḷḷi pillar-inscription of king Hāritīputta, of the Viṇhukaḍḍachuṭu line of the Sātakaṇi kings (EC, 7. SK, 263), was published to register the grant of a group of villages to a Brāhmaṇ. And the record of the Kadamba king Śiva-Skandavarman, on the same pillar (ibid., SK, 264), was published to renew that grant, and to confirm the enjoyment of it by a descendant of the original grantee.

The Mayidavōlu record of the Pallava king Śiva-Skandavarman, and the Koṇḍamudi record of Jayavarman (EI, 6. 84, 315), which have introduced to us a new archaic variety of the southern alphabet, were issued to register grants of villages to Brāhmaṇs.

The Paṭṭadakal pillar-inscription of A.D. 754 (EI, 3. 1), of special interest because it is a duplicate record in Nāgarī as well as in the local Kanarese characters, registers the grant of half a village to a Brāhmaṇ, with a subsidiary allotment of some land for religious purposes.

The Madhuban record of A.D. 630–31, of Harshavardhana of Ṭhāṇēsar and Kanauj (EI, 6. 155), was issued to cancel the tenure of a certain village under a forged charter, and to authoritatively assign the same village to two other Brāhmaṇs.

The Chammak record of the Vākāṭaka king Pravarasēna II. (F.GI, 235) was issued to grant that village to one thousand Brāhmaṇs, forty-nine of whom are named in it as the recipients appointed for the occasion.

The record on the Vakkalēri plates or Suḷḷiyūr grant of A.D 757 (EI, 5. 200; and see page 27 above), which gives the full direct lineal succession of the Western Chalukyas of Bādāmi, from the first paramount king, Pulakēśin I, to the last of the line, was framed in order to register the grant of a village to a Brāhmaṇ.

The Doḍḍahuṇḍi inscription of about A.D. 840 (EI, 6. 41), which records the death of the Western Gaṅga prince Nītimārga-Raṇavikrama, was incised in order to register the grant of some land to one of his followers.

The Nīlgund inscription of A.D. 866 (EI, 6. 98) registers the fact that, under a royal decree of the Rāshṭrakūṭa king Amōghavarsha I, the tax on clarified butter or ghee was assigned to the Mahājanas or elders of the village; evidently in order to make the proceeds of the tax available for expenditure by them on communal purposes, instead of being credited to the royal revenues.

And the Paiṭhaṇ plates of A.D. 1272, an epigraphic curiosity in respect of their great weight (see page 33 above), were issued to convey certain villages to fifty-seven Brāhmaṇs.

Finally, in this class we have, amongst numerous other records, the majority of the *vīrgals* of Mysore, which, differing in this respect from the similar records elsewhere, mostly record grants of land in addition to commemorating the deaths of heroes. For instance, the inscription on the Bēgūr stone of the period A.D. 908–38 (EI, 6. 45) not only records the death of the commander of the Nāgattara troop in a battle that was fought between the forces of Ayyapadēva and those of Vīramahēndra, but also records the appointment of his successor, and registers the grant of various villages to him.

A second clause in the supplementary inscription on the Ātakūr stone of A.D. 949–50 (see pages 58, 59, above) gives another instance of a grant of villages in recognition of bravery in the battle-field, to a hero who fought and survived.

And we learn from this last record that grants of this kind were sometimes accompanied by the ceremony of washing the warrior's sword, just as religious grants were usually accompanied by the ceremony of laving the feet of the priest into whose hands the donation was actually given.

E. The Essential Nature of the Inscriptions

We have thus shown the general nature of the epigraphic records, by a rough classification of them according to the objects to which they were directed.

Now, the donative records are by far the most numerous of all. And, as the result of this, we arrive at the point that in the vast majority of the epigraphic records we have a mass of title-deeds of real property, and of certificates of the right to duties, taxes, fees, perquisites, and other privileges. The copperplate grants are the actual title-deeds and certificates themselves. The stone inscriptions are usually of the same nature, but they sometimes mention the concurrent bestowal of a copperplate charter. And in such cases they are, rather, a public intimation that the transaction had been made

complete and valid by the private assignment of the necessary title-deeds and certificates.

The essential part of the records was, of course, the specification of the details of the donor, of the donee, and of the donation. And we have to bear in mind that, not only are the donative records by far the most abundant of all, but also, among them, by far the most numerous are those which we may call the records of royal donations; by which we mean grants that were made either by the kings themselves, or by the great feudatory nobles, or by provincial governors and other high officials who had the royal authority to alienate state lands and to assign allotments from the state revenues. The reason for this, no doubt, is that which was suggested by Dr. Burnell (B.ESIP, 94); namely, the tendency for gifts to take the place of the sacrifices which, according to the epic poems, and in fact according to some of the earlier records, the kings of India used to have performed in order to acquire religious merit, or to attain other objects. But, be the reason what it may, the fact remains, that the records of royal donations, whether for religious purposes or for other purposes, are the most numerous of all. And many of them register, not simply the gift of small holdings, but grants of entire villages, and large and permanent assignments from the public revenues.

It is to these facts that we are indebted for the great value of the records from the historical point of view. The donor of state lands, or of an assignment from the public revenues, must show his authority for his acts. A provincial governor or other high official must specify his own rank and territorial jurisdiction, and name the king under whom he holds office. A great feudatory noble will often give a similar reference to his paramount sovereign, in addition to making his own position clear. And it is neither inconsistent with the dignity of a king, nor unusual, for something to be stated about his pedigree in charters and patents issued by him or in his name. The precepts of the law-books, quoted by Dr. Burnell from the chapters relating to the making of grants, prescribe in fact that a king should state the names of his father, his grandfather, and his great-grandfather, as well as his own (B.ESIP, 97). That, no doubt, was a rule deduced from custom, rather than a rule on which custom was based. But we find that, from very early times, the records do give a certain amount of genealogical information. More and more information of that kind was added as time went on. And the recital of

events was introduced, to magnify the glory and importance of the donors, and sometimes to commemorate the achievements of recipients.

Thus, not with the express object of preserving history, but in order to intensify the importance of everything connected with religion, and to secure grantees in the possession of properties conveyed to them, there was gradually accumulated almost the whole of the great mass of epigraphic records from which, chiefly, the ancient history of India is now being put together.

F. The great Number of the Inscriptions

The great number of the inscriptions.

It must be added that neither are the epigraphic records at all few in number, nor are they confined to any limited divisions of the country.

The inscriptions of India itself come from all parts: from Shāhbāzgarhī in the north, in the Yūsufzai subdivision of the Peshāwar District, to the ancient Pāṇḍya territory in the extreme south of the Peninsula; and from Assam in the east to Kāṭhiāwār in the west.

And there are also others, from beyond the confines of India, of which we must take account in our Indian researches. We have important records in the Indian mixed dialect, neither exactly Sanskṛit nor exactly Prākṛit, from Afghānistān, and others, in Sanskṛit, from Nēpāl; these are so intimately connected with India that they are always classed and treated amongst the Indian records. We have records as well as manuscripts from Central Asia, in some dialect of the mixed class, and not only in the Kharōshṭhī characters, which, though used in the north-west of India, were not, we have now learnt, confined to that territory, but also in the Indian Brāhmī characters[1]; the exploitation of this source of information has recently begun. From over the sea, we have Sanskṛit, Pāli, and Singhalese records from Ceylon, useful to us in the historical line as well as in the palaeographic and linguistic departments; the systematic examination and publication of these has now commenced in the *Epigraphia Zeylanica*. From Further India, we have Sanskṛit records from Cambodia in Indo-China, ranging onwards from A.D. 604[2]. Records in

[1] See, e.g., Dr. Stein's *Archaeological Exploration in Chinese Turkestan*, 37, 52, 55.

[2] These have been made known to us by M. Barth, in his *Inscriptions Sanscrites du Cambodge*, and by M. Bergaigne, in his *Inscriptions Sanscrites de Campa et du Cambodge*.

Sanskṛit come even from Java; six such, ranging from A.D. 732 to 1373, are already known (see IA, 4. 356; 24. 184 ff., Nos. 35, 42, 53, 57, 290). And we are beginning to obtain valuable records in Burma.

Further, the numbers of the records in India itself are very great. For India as a whole, a detailed list of the earlier inscriptions, anterior to about A.D. 400, is, it is understood, in course of preparation for the *Epigraphia Indica*: the already known inscriptions of that period number altogether, large and small, between 1,100 and 1,200; and, when once that list has been published, we shall be in a position to appreciate them far better than has ever yet been done. For Northern India, that is to say, chiefly for the territory lying to the north of the Narbadā and Mahānadī rivers, and for the period from about A.D. 400 onwards, Professor Kielhorn has given us a list (EI, 5. appendix), with dates, names, and some other leading details, of more than 700 inscriptions already known. And for Southern India, the same scholar has given us a similar list (EI, 7. appendix) of no fewer than 1,090 inscriptions, ranging onwards from about A.D. 500, the contents of which have already been sufficiently made known to be available for treatment in that way.

And, whereas new records are every year being freely obtained in Northern India, it is known that in Southern India there is a wealth of materials the extent of which can hardly yet be gauged. Sir Walter Elliott, who first systematically explored the southern records, with the result of the compilation of a manuscript collection of which copies exist in the Libraries of the Royal Asiatic Society and of the University of Edinburgh, collected transcriptions of 595 inscriptions from the Kanarese country, and a large number of others from the Telugu districts. Professor Hultzsch has given us, in his first two volumes of *South-Indian Inscriptions*, and in the first two parts of the third volume, critical texts and translations of some 300 records, chiefly from the Tamiḻ country. From the State of Mysore, Mr. Rice has brought to our notice some 9,000 records, in the volumes of his series entitled *Epigraphia Carnatica*. From the Belgaum and Dhārwār Districts, in the Bombay Presidency, ink-impressions of nearly 1,000 inscriptions were collected under the direction of the writer of this account; and the southernmost parts of Dhārwār, which abound with such materials, and some parts of the Belgaum and Bijāpūr Districts and of the Nizām's Dominions, still remain to be explored. And a great mass of materials from

the eastern parts of Southern India lies ready to hand in the office of the Government Epigraphist.

G. The precise Dating of the Inscriptions

The precise dating of the inscriptions.

Further, we are not in any way left to grope our way blindly in the arrangement of this vast mass of materials. We have a definite guide in the fact that, from the first century B.C., the epigraphic records are for the most part specifically dated: some in the regnal years of well-known kings; others in the astronomical Kaliyuga reckoning, the initial point of which was placed in 3102 B.C.; and the large majority in the various historical eras, commencing with the so-called Vikrama era founded (see page 4 above, note 2) by Kanishka in 58 B.C. And with the specification of the year there are usually given details of the month, the day, etc., which sometimes enable us to state even to an hour the exact occasion of the framing of any particular record.

The initial points of all the eras are now well known. And we are now fully provided with tables which enable us to determine with accuracy, and without much trouble, the European equivalents, not only of the years, but also of all the other details of the Indian dates. Each worker, of course, will select for use, from amongst the various guides that are available, those tables with which he can work most quickly. But the following hints may be given to those who have still to take up this line of research.

For special expositions of most of the various eras, we have Professor Kielhorn's articles on the examination of questions connected with the Vikrama era of 58 B.C. (IA, 19. 20, 166, 354; 20. 124, 397); on dates of the Śaka era of A.D. 78 met with in inscriptions (IA, 23. 113; 24. 1, 181; 25. 266, 289; 26. 146); on the epocb of the Kalachuri or Chēdi era of A.D. 249 (IA, 17. 215); on the Harsha era of A.D. 605 or 606 (IA, 26. 29); on the Kollam era of A.D. 825 (IA, 25. 53, 174); on the epoch of the Nēwār era of A.D. 879 (IA, 17. 246); on the epoch of the Lakshmaṇasēna era of A.D. 1119 (IA, 19. 1); and on the Saptarshi era of Kashmīr, which has its initial point in 3076 B.C. (IA, 20. 149). And in the same line we have Mr. Shankar Balkrishna Dikshit's account of the twelve-years' cycle of the planet Jupiter (IA, 17. 1, 312; F.GI, appendix 3). For the Gupta-Valabhī era of A.D. 320, see F.GI, introd., 124.

For exactly accurate calculations, we have Professor Jacobi's tables for the computation of Hindū dates (EI, 1. 403; 2. 487; recast and simplified from an original article in IA, 17. 145),

and Professor Kielhorn's tables for the sixty-years' cycle of Jupiter (IA, 18. 193, 380; 25. 233).

And for closely approximate calculations, sufficiently accurate in all ordinary circumstances, we have Dr. Schram's tables for the conversion of Hindū dates (IA, 18. 290), and the work of Mr. Sewell and Mr. Sh. B. Dikshit, entitled *The Indian Calendar*, with an appendix on eclipses of the sun in India by Dr. Schram, and with a supplement on eclipses of the moon in India by Mr. Sewell. This last-mentioned work, we may add, contains also tables for the computation of dates of the Muhammadan calendar; and, along with a general account of all the Hindū eras, it presents much useful information on the subject of the connected topic of Hindū astronomy.

We may finally mention, for light on various considerations that must be borne in mind in connexion with the details given in Hindū dates, Professor Kielhorn's article on festal days of the Hindū lunar calendar (IA, 26. 177).

V. General Observations and Indications of Lines of Future Research

General observations and indications of lines of future research

We have thus explained and illustrated the value of the inscriptions of India. We have given an account of the substances on which they were recorded. And we have explained the essential nature of them, and have shown the precise reasons for which they are historically and chronologically so important.

For the most part the exploration of the inscriptions, and the collation of results from them, require nothing but intelligence and patience, coupled with a certain amount of experience. But there is one class of them which must be used with only the greatest caution, if at all.

Just as there are in India numismatic forgeries and (see IA, 30, 1901. 201, note 2) even literary forgeries, so also there are spurious, counterfeit, or forged records, as well as genuine ones. Some of these spurious records have imposed on us in the past. From accepting them, as well as from giving too ready a credence to the pseudo-historical legends which exist in abundance in so many parts of the country, and to the fantastic archives and Vaṁsāvalis, or successions of kings, of Orissa, and to similar documents obtained elsewhere (see page 8 above), and to imaginative chronicles such as the Koṅgudēśa-rājākkaḷ and the Rājāvalikathe (see page 6), much erroneous matter has been introduced into the history of India. And, in

trying to prevent the introduction of any more such matter into it hereafter, as well as in eliminating the fables that have already been imported into it, we have to be specially on our guard against such materials as falsely purport to be ancient official records or vouchers issued by official authority.

While, however, we must thus indicate the existence of these spurious records, space does not permit of our entering into any details about them, and of accounting for the existence of them and showing how they may be detected. On these points reference can only be made to a full exposition of this matter given elsewhere (IA, 30, 1901. 201 ff.), with a list, which however is now not quite up to date, of the known records of this class. And in the same place there will be found a brief mention of certain other records, which also must only be used with discrimination. Some of these are, by their own admission, reproductions of original records; and we have to consider how far the originals may have been reproduced correctly, or may have been unintentionally perverted. Others of them, while not admitting that they are reproductions, plainly are such, or are reasonably suspected to be such. And there are also genuine records which have been tampered with (see ibid., 123, and note), in order to make them serve purposes other than those originally intended by them.

That matter we cannot enter into here. Nor is this the place for presenting any detailed exposition of the results that we have obtained from the genuine records.

The political history forms the subject of other contributions to this volume, and has also been treated in other ways elsewhere. For detailed accounts of different parts of India from this point of view, reference may be made to the present writer's *Dynasties of the Kanarese Districts of the Bombay Presidency*, in the *Gazetteer of the Bombay Presidency*, vol. i, part 2 (1896), pp. 277–584; to Dr. Bhandarkar's *Early History of the Dekkan*, in the same volume and part, pp. 133–275; and to Pandit Bhagwanlal Indraji's *Early History of Gujarāt*, in the same volume, part 1 (1896), pp. 1–206. We have, further, Mr. V. A. Smith's *Early History of India* (1904), wider in its title, but dealing chiefly with Northern India and requiring to be read with a knowledge of the views of other writers even for that part of the country. And for a general résumé of bases, with full references, arranged in such a way that the work will long remain indispensable to all students of Indian history, reference may be made to Miss Duff's *Chronology of India* (1899).

Thus, a great deal has already been done in the department of political history. Of course, many details still remain to be filled in from future exploration and research. But we have now a very fair knowledge of the ancient past of India from 58 B.C. to A.D. 320, and a comparatively copious knowledge of it from the latter time onwards. And we are indebted for this almost entirely to the inscriptions.

But, though so much has been achieved, a great deal still remains to be done even in the line of political history. And there are other departments of research, which must go hand in hand with the study of the inscriptions, in which hardly a beginning has been made, beyond a preliminary treatment, in detached writings, of details which will have to be hereafter brought together and handled on broader lines in connected and more easily accessible works.

A. The Inscriptions

In the first place, only a small part of the mine of epigraphic information has been as yet explored. For the earlier period, before A.D. 320, when the great Gupta dynasty of Northern India rose to power, we are looking forward to the results of excavations, still to be made, which should, and undoubtedly will, enable us to get at many an important record now hidden from sight. For the period onwards from that date, we have still to trace many additional copperplate records, not yet brought to notice, which unquestionably exist in private hands: and from the enormous number of stone records we have to select those which will best repay the trouble of editing them in full; dealing with the others by means of abstracts that shall bring forward every point in them that can be turned to practical account.

The inscriptions.

As regards the earlier period, reaching back to the time of Buddha, we have one record, the inscription on the Piprahwa vase (see page 43 above), the oldest known Indian record, which may possibly date from within a century after the death of Buddha. We have a certain amount of epigraphic material of the time of Aśōka. We have some such material for the interval from his time to 58 B.C. We have a very appreciable amount of such material for the interval from that date to A.D. 320. And indications are not wanting that systematic exploration of judiciously selected sites, as well as chance discoveries, will greatly and quickly increase the number of instructive inscriptional records available for the whole period: we may

point, for instance, to the results of the excavations recently made under the supervision of the Director-General of Archaeology at Sārnāth, Kasiā, and Basāṛh, which have well illustrated what important epigraphic remains may be found lying even close at hand within quite easy reach. Still, for the present, we are greatly dependent for our knowledge of that period upon coins, and upon tradition as preserved in literary works; both of these being sources of information which must be used with extreme care and discrimination. The explorations and the chance discoveries have still to be made, and the results of them have to be examined and weighed as they may come to light.

In the second place, we must before long make a start towards bringing the records together, in chronological order, in volumes according to the dynasties and periods to which they belong, on lines such as those adopted in the volume of *Gupta Inscriptions*, prepared by the writer of the present account as the third volume of the intended *Corpus Inscriptionum Indicarum*, which, however, has not as yet gone beyond that volume and vol. i, by General Sir Alexander Cunningham, which gave the first collective treatment of the records of the Aśōka period.

It is very difficult to exhaust any particular line of research from texts which are scattered about in the volumes of different journals, amongst extraneous matter of all sorts and without any attempt at, or possibility of, general arrangement according to dates, and many of which are printed in native characters which do not lend themselves to the use of capitals, thick type, and other devices for marking points that are to be specially attended to. To a great extent, of course, this scattered and unsystematic disposal of our results has been unavoidable. As an inevitable consequence, however, not even the department of political history has been dealt with as fully as might be the case even from such materials as we already have for reference. And, though much has been accomplished by the official journal, the *Epigraphia Indica*, towards minimizing the difficulties entailed by having to search the volumes of so many different publications, more still requires to be done.

We must set about bringing together, in the manner indicated above, such records as have already been published; inserting at the same time any others of each series that can concurrently be prepared for publication. We want, for instance, one volume devoted to the records of the Western Chalukyas of Bādāmi, with those of the early Kadambas of Banawāsi and the Pallavas

of Conjeeveram, and with some others of the same period which are not numerous enough to make up a volume by themselves. We want another volume for the records of the Eastern Chalukyas; another for those of the Rāshṭrakūṭas; others for those of the Kalachuris and the Gāhaḍavālas; and so on; each with the miscellaneous records of the period brought in. When such compilations have been made, we shall have the basis of a systematic arrangement, by means of which the materials can be examined far more conveniently and exhaustively than at present. And it will then be an easy and simple matter to insert in such volumes, in the proper places, references to further records, which, of course, must continue to be published in the present detached manner until sufficient materials for supplementary volumes accumulate.

In thus rearranging the records already edited, we have to revise the published texts, and bring them up to date on a uniform system according to our latest knowledge and experience. Even among the most recently issued versions, there are but few that could be finally reprinted just as they stand. We require to have both the texts and the translations dealt with critically, according to a thoroughly consistent method of treatment. The same passages in different records have to be translated in identically the same words. And technical titles and expressions require to be recognized, and to be used as they stand without attempting to render them by English words which may, indeed, be literal translations, but the meanings of which do not suffice to convey the ideas intended by the originals. There are many points in the records which will not be recognized until we begin to deal with the records on the lines indicated above. There are also many allusions in the records which we are only now beginning to understand. And, as a very suitable instance of what an up-to-date revision can effect, we may point to the case of the Aihoḷe inscription of A.D. 634–35, of the time of the Western Chalukya king Pulakēśin II. It was first handled fully by the present writer some thirty years ago (IA, 5. 67; 8. 237). It seemed, then, that at any rate all the historical matter in it had been brought out fully and correctly. But it remained for Professor Kielhorn, in lately examining the record anew and re-editing it with the advantages of experience and wider knowledge (EI, 6. 1), to remove some mistakes then made, and to discover yet two more historical items in it, in the mention of the Kollēru lake and of the territory on the north of the Bhīmā, and, further, to detect and explain two recondite allusions, one to a grammatical

rule of Pāṇini and the other to the traditional precepts for the behaviour of kings in exile, and to bring out various interesting points in which the writings of the poet Kālidāsa were used and imitated in this record and in some other early ones.

B. Tradition

Tradition. We have mentioned tradition, as preserved in literary works, as one of our sources of information; but with the reservation that, along with what we gather from coins, it must be applied with extreme care and discrimination.

We may fairly use tradition to help us to interpret obscure expressions in the inscriptions, and in a general way to explain the meaning and the bearing of those records. We may even use it to fill up gaps in the history deduced from the inscriptions, when nothing incongruous or improbable is suggested by it; especially when it receives, in respect of immediate surroundings, any specific corroboration from the inscriptions, as in the case of the interval from the death of Buddha to the anointment of Aśōka to the sovereignty, and in the case of the missions that were sent out by Moggaliputta-Tissa to establish the Buddhist faith in the border-lands (see pages 44, 54, above).

But, when we can gather plain facts from the epigraphic records and arrange them on the bases of those records, we are independent of tradition, and can then recognize it only with a view to gauging its value in the light of what we learn from the only definite source of information. And we must not, in any circumstances, twist the assertions of tradition. We must not start by conjecturally correcting its statements, just as fancy may dictate, in order to make them support that which we seek to prove. We must not, as a basis for our application of it, make it say what it does not say. We may correct it only when we have undeniable evidence that it is open to correction, and an unmistakable guide as to the direction in which it may be corrected.

The Buddhist tradition of the seventh century A.D., of India, Gandhāra, and Ḳashmīr, as reported by Hiuen-tsiang[1], placed the initial dates of Aśōka and Kanishka respectively 100 and 400 years after the death of Buddha. Applied to 264 B.C. as the initial date of Aśōka the Maurya[2], this gives us 364 B.C. as one amongst various more or less substantial traditional dates for the death of Buddha. With that, however, we are not here concerned. Our point is this. A combination of those state-

[1] For a full exposition of this matter, see JRAS, 1906. 979 ff.

[2] See ibid., 984 ff.

ments places the initial date of Kanishka 300 years after the initial date of Aśōka; with the effect, on the same application, of setting up A.D. 37 for the initial date of Kanishka. But that did not suit the views of certain writers who wished to make the initial date of Kanishka fall in or about A.D. 78: and, accordingly, they increased the traditional 400 years for Kanishka into 437 years, by applying the statements as if they gave for him an interval of 300 years from, not the initial date of Aśōka, but the end of his reign; so that, Aśōka the Maurya having reigned for thirty-seven years, from 264 to 227 B.C., they of course obtained A.D. 73 (a result quite close enough for their purposes) for the initial date of Kanishka. The key to the matter here is found in the Buddhist tradition of Ceylon, confirmed for India by a record of Aśōka himself. From those sources we know that the said tradition of India, Gandhāra, and Kashmīr, confused Aśōka-Dharmāśōka the Maurya, in respect of his date, with a predecessor, Aśōka-Kālāśōka the Śaiśunāga, who began to reign 90 years after the death of Buddha, and in whose eleventh year, 100 years after the death of Buddha, there was held the second Buddhist Council. From those sources we know, also, that the death of Buddha occurred 218 years before the initial date of Aśōka the Maurya; that is, in 482 B.C. And, applied to 482 B.C., the statement of 400 years for Kanishka places his initial date in 82 B.C. That is, we can now see, it is a statement in round numbers of 400 for 424 years; and the tradition is in perfect accordance with the fact that Kanishka founded the so-called Mālava or Vikrama era commencing in 58 B.C.[1].

Again, tradition, as recorded by Hiuen-tsiang, tells us as follows:—In the midst of the 1000 years after the death of Buddha[2], or within the 1000 years after the death of Buddha[3], there reigned at Śrāvastī a powerful and ostentatiously lavish king Vikramāditya, who ultimately lost his kingdom in consequence of behaving uncivilly to a Buddhist teacher named Manōratha, and was followed[4] by a successor who showed respect to men of eminence. Further, tradition, as recorded by the same writer, tells us[5] that in quite a different part of India, namely in Mālava, and about sixty years before the time (A.D. 641–42)

[1] See page 4 above, and note 2.

[2] Julien, *Mémoires*, 1. 115; Beal, *Records*, 1. 105.

[3] Julien, loc. cit., note 3; Watters, *On Yuan Chwang*, 1. 211.

[4] Julien, loc. cit., 118; Beal, loc. cit., 118; Watters, loc. cit., 212.

[5] Julien, op. cit., 2. 156; *Vie*, 204; Beal, op. cit. 2. 261; *Life*, 148; Watters, op. cit., 2. 242.

when Hiuen-tsiang was writing, there was a king Śilāditya, who reigned for fifty years[1], and who, in addition to being a man of great wisdom and one who was attached to and beloved by his subjects, was full of respect for the three precious things of the Buddhist faith. These two accounts refer to very different parts of India. They were recorded on different occasions, and without any reciprocal connexion. And even the date of Vikramāditya of Śrāvastī still remains to be determined. Nevertheless, and because the result is supposed to fit in with a very liberal adjustment of some mythical statements, distinctly referred to the period about A.D. 78, made in the twelfth century by Kalhaṇa in the Rājataraṁgiṇī, 3. 125–331, about a king Harsha-Vikramāditya and his son Pratāpaśīla-Śilāditya of still a third kingdom, Ujjain, we have been told (JRAS, 1903. 565 ff.) that, while Hiuen-tsiang has reported the facts themselves correctly, he has confounded the two names, and what he relates about Vikramāditya of Śrāvastī really applies to Śilāditya of Mālava, but also, while we transfer Vikramāditya from Śrāvastī to Mālava, we are to leave Silāditya in that same locality.

Results can be strung together from treatments of tradition such as the two cited above. But such results are not history.

We may use tradition. But we must weigh it, and must not distort it. We must see that we understand it aright. We must not take one line of it, say the Buddhist tradition of the Dīpavaṁsa of Ceylon, and modify it according to another line, say the Brāhmaṇical tradition of the Indian Purāṇas. And we must take care that whatever tradition we do use shall be ancient. We cannot base history upon fanciful collections of legendary matter, dignified by the name of tradition, presented to us in modern compilations such as the Koṅgudēśarājākkaḷ and the Rājāvalikathe (see page 6 above). And, in these days of dissemination of knowledge, we must be on our guard against admitting so-called traditions which are really the results of our own conjectures dressed up in other forms. In this direction, we have before us the notorious case of the bards of Kāṭhiāwār (see F.GI, introd., 49 f.). They have a story about the rise of Valabhī, which was at one time brought forward and accepted as 'an old-world tale' which had an historical basis, though it might not be altogether accurate. But it was subsequently made known that the story only sprang into existence some quarter of a century ago,

[1] Julien, *Mémoires*, 2. 156; *Vie*, 205: Beal. *Records*, 2. 261; *Life*, 148.

and owed its origin entirely to modern speculations which had found their way to the bards through an educational treatise.

In short, it cannot be too steadily borne in mind that, while we may most suitably take tradition as a subsidiary source of history, we must weigh it carefully before we use it. It can in no way take the place of the epigraphic records. It is of no value against any plain and unmistakable assertions made by them.

C. Palaeography, Coins, and Art

Palaeography, coins, and art.

The palaeographic inquiry has been brought to a climax for the present by Professor Bühler's *Indische Palaeographie*. The German original of this invaluable work, with its plates, was published in 1896 as part xi. of the first volume of the *Grundriss der Indo-Arischen Philologie und Altertumskunde*, or Encyclopaedia of Indo-Aryan Research. And the English version of the letter-press of it has been issued as an appendix to the *Indian Antiquary*, vol. xxxiii, 1904.

But in this line, as also in the historical line, on which it is largely dependent, and, in fact, in every line of Indian research, we are steadily accumulating more facts and better materials, and making substantial progress every year. Already, some of the details exhibited in Professor Bühler's work might now be treated, or at least considered, from other points of view. Already the Mayidavōlu record of Śiva-Skandavarman and the Koṇḍamudi record of Jayavarman (see page 59 above) have given us a new archaic variety of the southern alphabet, which was not known when Professor Bühler was writing.

Even the palaeographic inquiry, therefore, has sooner or later to be taken a step farther than the high point to which it has been brought by the labours of Professor Bühler.

As one way of helping to this end, the occasions of publishing more advanced texts and translations of records already handled, must be utilized to substitute real facsimiles of at least the more representative originals, in the place of the manipulated and sometimes misleading lithographs that have occasionally been issued in times gone by. Then, attention was directed to publishing clear and easily legible lithographs, rather than to giving facsimiles which an unpractised eye might find it difficult to deal with because of their including all the imperfections of the originals due to damage and decay. Now, with greatly improved methods of preparing our materials for reproduction, we take a wiser course.

We require for critical work, in any line, purely mechanical reproductions, which shall be actual facsimiles of the originals as they stand, prepared without, at any stage, any touching up by hand of the materials, ink-impressions or uninked estampages, which are the bases of them, or of proofs from those materials. Any such touching up by hand of such materials, and any issuing of lithographs from eye-copies, gives us, not what really stands in an original but that which the operator thinks he sees there, which is often quite a different thing; and, for two pointed illustrations of this, reference may be made to some remarks by the present writer on another occasion (EI, 6. 80). Any such process deprives of all value the results that are laid before us. And it must be sedulously avoided, in the first treatment of any new materials, as much as in the revision of any old ones.

In connexion with this branch of the general inquiry, it must also be borne in mind that it is not easy to fix within a century or so, or even more, on simply palaeographic grounds, the time of an undated record which does not present the name of a well-known king, or some other specific guide. And of this there is on record a case in point that may be appositely cited. It has been said, and not unjustifiably (JRAS. 1903. 393), that the characters of the legend on a certain coin may be, perhaps, of the ninth or tenth century; leaving us to infer that the coin itself might be allotted to that time. But from the words of the legend, 'the glorious Rāyamurāri,' we know that the coin is one of the Kaḷachurya king Rāyamurāri-Sōvidēva-Sōmēśvara of Kalyāṇi (see F.DKD, 471), who reigned A.D. 1167–77.

There should further be borne in mind certain considerations which apply also to numismatic theories and views about art, as other bases for the construction of history.

In the case of royal proceedings and the records of them, we may expect that both the artistic standard of any statues or other sculptures chosen as objects of presentation, and of any shrines or other buildings ordered to be erected, and also the characters, drafting, etc., of the records of such acts, should ordinarily be the best procurable of their kind and time, and should be more or less uniformly progressive in one direction or another; in point of fact, it would seem, towards deterioration rather than improvement. But, even so, there must have been incidental times of throwing-back, and occasions when actually the best synchronous work in either line could not be obtained, even on royal demands. And

the position must always have been very different in respect of private proceedings and the records of them; and we must remember that many of the records of the first century B.C. and the following two centuries, and particularly those which come from Northern India, are private non-official records of private non-official donations and foundations. There are, and there must always have been, everywhere, and in every line, of writing, sculpture, or any other branch of work, good and bad workmen, synchronously and in the same localities. The terms of workmen vary, and must always have varied, according to their skill and reputation. Not every ordinary individual can have afforded to employ, even if he knew, the most deft sculptor, to give him the highest art, or the best writer, to give him the most approved official or even non-official script of his time. And considerations of that kind, and of locality, and of the materials used, metal, stone, etc., as the case may be, quite as much as differences of time, may account for many of the difficulties experienced in some quarters, sometimes on palaeographic grounds, sometimes from other points of view, of construing, as belonging really to one and the same series, certain dates from Northern India which run harmoniously from the year 3 to the year 399 without any actual specification of the name of the era,—the so-called Vikrama or Mālava era, founded by Kanishka in 58 B.C.,—to which they belong.

So, too, as regards coins. The sinking of dies must always have been a somewhat close profession, transmitted hereditarily, and probably confined to but a few families, in but a few localities, the members of which would be summoned far and wide for the exercise of their skill. In this line, too, not always could the best work have been obtainable, even by a king. A new design, shape, or weight from Greece or Italy, or a new development of the Greek alphabet, may easily have reached Broach by sea, and may thence have travelled overland via Ujjain to Muttra, much more quickly than it could penetrate into India by way of Persia and the north-west frontier. Or, again, a new design, shape, or weight, originating in Persia, may have reached India long before it could reach Italy or Greece. And such conditions as these, coupled with a natural tendency to follow, if not exactly to copy, previous models, may account for many of the difficulties that attend the arrangement of numismatic facts.

In short, not only palaeographic views, but also numismatic theories and deductions based on art, must always be subordi-

nate to, and must be regulated by, what we can learn in the way of clear facts from the inscriptional records.

D. Geography

Geography.

As has been said, even the political history has not been yet worked out from the published records as fully as might be done. And there are other lines of inquiry, of general historical interest, particularly in the geographical, administrative, and fiscal departments, which have hardly been touched upon at all to any purpose.

The geography, indeed, an attractive branch of inquiry which has been popular in many quarters, has received a certain amount of attention. But the researches in this line have been made chiefly with the object of trying to identify places, countries, and tribes mentioned by foreign writers, namely, the Greek historians and geographers, the Chinese pilgrims, and the Arab travellers, and of constructing maps of ancient India from their writings. And in that connexion much has been put forward in vain, in consequence of an idea that we can and must still find an existing representative of every ancient name recorded by the foreign writers. But tribes die out and disappear; towns decay and are deserted; seaside emporia sometimes shift: and, in addition to the gradual transition from classical to vernacular forms, the names of cities are liable to change entirely in the course of time, even though the places themselves survive.

Some of the records of the Indian campaign of Alexander, in 327 to 324 B.C., were plainly based on accounts written by persons who actually went to India with him[1]. Yet but few of the places mentioned in them have been identified with any real approach to certainty.

The author of the Periplus of the Erythraean Sea[2], who wrote at some time about A.D. 85, evidently sailed in person round the coast of India. But we cannot expect to find now every place on the coast mentioned by him. And, as regards his

[1] See, in particular, *Ancient India, its Invasion by Alexander the Great* (1893), by J. W. McCrindle; and his *Ancient India as described in Classical Literature* (1901).

[2] For McCrindle's translation of this work see IA, 8, 1879. 107 ff. He has there shown grounds, which seem conclusive, for placing the work between A.D. 80 and 89, though by other authorities it has been placed somewhat earlier, in Pliny's time (A.D. 23 to 79), and, on the other hand, considerably later, after A.D. 161. The writer of the geographical part of the article on Ptolemy in the *Encyclopaedia Britannica*, vol. xx, has placed it 'about A.D. 80' (p. 94).

inland details, his statement that Paiṭhaṇ, which is really about 200 miles almost due south-east from Broach, lay south of the latter place, at a distance of a twenty days' journey, quite suffices to show that, for places away from the coast, he was at least sometimes dependent on information which was liable to be of a very vague kind; and it left us free to exercise considerable latitude of choice, fully justified when at length the identification came to be made (see page 82 below), in applying his immediately following assertion that Tagara, a famous inland emporium, situated at a distance of a ten days' journey from Paiṭhaṇ, was on the east of Paiṭhaṇ: the correct bearing is, in reality, as closely as possible south-east by south.

Ptolemy, who wrote approximately[1] at some time about A.D. 150, had not even the opportunities of personal observation which the author of the Periplus enjoyed, but only compiled from the reports of travellers and navigators, and from the works of previous writers, of whom some may have enjoyed such advantages, but others had simply put together information obtained similarly at second-hand. Consequently, it is only in a very general way, at any rate with merely our present means of applying the information given in his work[2], that we can use his statements towards reconstructing the early geography.

The writer of the geographical part of the article on Ptolemy in the *Encyclopaedia Britannica*, vol. xx, has told us that Ptolemy's geographical knowledge is strikingly imperfect even in regard to the Mediterranean and its surroundings, and that it is especially faulty in respect of the southern shores of Asia, in connexion with which he had obtained (as we can readily detect) only a vague acquaintance with extensive regions, based on information which was indeed to a certain extent authentic, but which had been much exaggerated and misunderstood. Ptolemy (we are told) recognized the importance of utilizing, to check and adjust results, any positions of places that had been determined by actual observations of latitude and longitude. But there was not any appreciable number of such places. And thus 'the positions laid down by him were really, with very few exceptions, the result of computations of distances from itineraries and the statements of travellers,

[1] It appears that the first-recorded observation of this celebrated mathematician, astronomer, and geographer was made in A.D. 127, and the last in A.D. 151 (*Encyclopaedia Britannica*, xx. 87); but that he was still alive in A.D. 161 (*Smith's Classical Dictionary*, 627).

[2] See *Ptolemy's Geography of India and Southern Asia*, with a commentary, by McCrindle, in IA, 13, 1884. 313-411.

estimates which were liable to much greater error in ancient times than at the present day.' Moreover, in addition to placing the equator at a considerable distance from its true geographical position, and accepting a prime meridian which made all his eastern longitudes about seven degrees less than they should have been, he made a still more serious mistake, which 'had the effect of vitiating all his subsequent conclusions,' in taking every degree of latitude, and of longitude measured at the equator, as equal to only 500 stadia or fifty geographical miles, instead of its true equivalent of 600 stadia or sixty miles. And, as the result of the last-mentioned error, 'if he had arrived at the conclusion from itineraries that two places were 5,000 stadia from one another, he would place them at a distance of ten degrees apart, and thus in fact separate them by an interval of 6,000 stadia.'

The curious and utterly erroneous conception of the shape of India formed by Ptolemy, is well shown by the map (IA, 13. between pp. 322, 323) which accompanies Mr. McCrindle's extracts from his work. And the general distortions that resulted from his data and method of work are admirably exhibited in an ingenious form in the *Encyclopaedia Britannica*, vol. xv, in plate 7, between pp. 516, 517, which shows Ptolemy's idea of the world superimposed upon an actual map of the corresponding portions of the world. His results, exposed in this way, place Paiṭhaṇ (on the Gōdāvarī) well out to sea in the Bay of Bengal. They make Ceylon an enormous island, stretching from below the equator to about the twelfth degree of north latitude, and covering the position of the northern half of Sumatra and of part of the Malay Peninsula, with a large area of the Bay of Bengal, including the Nicobar Islands. They make the Mahānadī river run over Siam and Cambodia. They make the Ganges run over the very heart of China, flowing towards the sea somewhere near Canton. They carry Palibothra, which is Patna (on the Ganges), to the east of a line from Tonquin to Pekin. And they make the Himālayan range, as represented by the Imaos and Emodos mountains, run north of Tibet, through the north of China, across the Yellow Sea and Korea, and into Japan.

It is obvious that, before we can do anything substantial with Ptolemy's work, in the direction of utilizing it for even the outlines of the early political geography of India, we need something more in the way of an exposition of it than even that which Mr. McCrindle has given us; and we require an adjustment of Ptolemy's results for India similar to that

which Colonel Gerini has made (JRAS, 1897. 551) in respect of his results for the countries beyond the eastern confines of India. But it is also certain that, though we may gather from Ptolemy a fair quantity of general information about tribes and territorial divisions, no amount of adjustment will ever enable us to frame from his work a map of India that would be even approximately accurate in its details.

Passing on to a still more definite source of information, we find that much even now remains to be done in connexion with the writings of Hiuen-tsiang[1], who travelled through practically the whole of India between A.D. 629 and 645, and kept a very close record of his peregrinations.

The territorial divisions mentioned by Hiuen-tsiang are fairly easy to locate, more or less approximately, with the help of the epigraphic records. But his cities, or such of them as survive, are more difficult. Before his writings can be fully utilized, we want better readings and explanations than have even yet been offered of his place-names. We have to re-examine his movements from the point of view that 100 *li* denoted the time occupied in making a day's journey[2]; the said day's journey averaging very closely about twelve miles, but being actually determined in each case by such considerations as the nature of the country traversed and the distances between villages, sarais, and other convenient halting-places, so that it might easily in ordinary circumstances be anything from ten to fourteen miles, and in exceptional cases might have even a wider range in either direction. In connexion with the point that the distances and directions given by him as from country to country are almost always the distances and directions from each capital to the next capital, we have to bear in mind, in the first place, that even a slight difference in bearings will lead to a wide divergence in position when the bearings are set out on a long line; and, in the second place, that, whereas it is impossible that every capital can have been due north, east, south, or west, or due north-east, north-west, south-east, or south-west, from the preceding capital, he

[1] See *Histoire de la Vie de Hiouen-Thsang* (1853), and *Mémoires sur les Contrées Occidentales par Hiouen-Thsang* (two vols., 1857–58), by M. Stanislas Julien, with an examination of the geographical results by M. Vivien de Saint-Martin; *Si-yu-ki, or Buddhist Records of the Western World* (two vols., 1884), and *Life of Hiuen Tsiang* (1888), by the Rev. Samuel Beal; and *On Yuan Chwang's Travels in India* (two vols., 1904–5), by Mr. Thomas Watters.

[2] On the Indian *yōjana* and the Chinese *li* as measures of itinerary distance, see JRAS, 1906. 1011 ff.

recognized no points of the compass beyond those eight, and very seldom, if ever, gave the bearings except as if they were due north, etc., or due north-east, etc. And, not only some cases of discrepancy between the *Records* and the *Life*, but also certain various readings which exist, are quite enough to show that both his bearings and his directions have not always been correctly transmitted to us.

We have by no means yet found (if we ever can find) every city and other place mentioned even by Hiuen-tsiang; and some of the most confidently asserted identifications of places spoken of by him are unquestionably wrong.

Take, for instance, the case of the capital of Kaliṅga, which he visited and mentioned without, apparently, recording its name. M. Vivien de Saint-Martin felt satisfied (*Mémoires*, 2. 395) that it is represented by Kaliṅgapaṭam on the coast, in the Gañjām District; an identification which was practically, if not absolutely, endorsed by Mr. Ferguson (JRAS, 1873. 252): while General Sir Alexander Cunningham arrived at the conclusion (AGI, 516) that it must be Rājamahēndri on the Gōdāvarī, the head-quarters of a subdivision of the Gōdāvarī District. But the information furnished by the epigraphic records makes it certain that it was neither of those two places. It was the city Kaliṅganagara, which dates back to at any rate the time of king Khāravēla in the second century B.C., and was from about A.D. 645 onwards the capital of the Gaṅga dynasty of Kaliṅga. And the place is now represented (see EI, 4. 187 ff.) by the villages Mukhaliṅgam and Nagarakaṭakam and the ruins between them, on the Vaṁśadhārā river, in the Parla-Kimeḍi Zamīndārī or estate, in the Gañjām District.

Take, again, the case of an ancient city in the Punjab, regarding the identity of which there has been almost as much speculation, with announcements of confident results in various directions, as in the case of the famous Tagara (see page 82 below.) Hiuen-tsiang visited the city in question, and has mentioned it as She-ka-lo, the old capital of the Cheh-ka, Ṭakka, country, and the seat of government of the great foreign invader Mihirakula about the commencement of the sixth century A.D. It is otherwise of interest as being the Śākala of the Mahābhārata, and the Sāgala of the Milindapañha, which latter work specifies it as the capital of king Milinda, whom it is customary to identify with the Graeco-Bactrian or Indo-Grecian king Menander, and to place in the second century B.C. And there would have been no difficulty in finding its modern representative long ago, if only the attempt had been made

without starting by correcting the indication given by Hiuen-tsiang as to its position. Starting by making such a correction, Sir A. Cunningham felt satisfied (C.AGI, 179 ff.) that the site of this city is marked by the Sangla Hill in the Gujrānwāla District. And proceeding on the same lines, and taking us at least as far from the locality indicated by the Chinese pilgrim, Mr. Rodgers and Mr. Vincent Smith pronounced[1] that this city is apparently either Chiniōṭ or Shāhkōṭ in the Jhang District. In reality, however, as has now been proved by the present writer[2], Śākala, Sāgala, She-ka-lo, is Siālkōṭ, the chief town of the Siālkōṭ District.

That the writings of Hiuen-tsiang, as transmitted to us, are sometimes open to correction is, indeed, certain. For example, they tell us that, going above 200 *li* south-east from P'i-lo-shan-na, he arrived at a country (capital) named Kah-pi-t'a; and that then, going north-west for nearly 200 *li*, he reached a country (capital) named Ka-no-kü-she (Watters, I. 333, 340). Here there is undeniably some mistake: the text represents him as exactly retracing his steps, and yet arriving at a totally different place. But, even with a various reading which gives the bearing from Kah-pi-t'a to Ka-no-kü-she as south-east instead of north-west, we must not jump too readily to the conclusion that that is the detail in which the mistake lies. Before we can approach that point, we must determine, more definitely than has yet been done, the exact position of Kah-pi-t'a, and make sure that the mistake does not lie in the specification of the direction of that place from P'i-lo-shan-na.

With the writings of Hiuen-tsiang we shall be able to do much more than has hitherto been done, if we refrain from the prima-facie assumption that his statements are open to correction freely, and if, when we find cases like the above in which there is certainly some mistake, we weigh all the surroundings more fully, instead of forming a preconceived notion and then making the correction in accordance with it.

And there are other writings which are likely to be of considerable use, if we are given the means of looking behind certain restorations which have been made in the treatment of them. For instance, a fair amount of geographical information is to be found in Alberūnī's work on India, written in A.D. 1031–32. But, in order that the work may be fully utilized, not only in this direction but in others also, by those who do

[1] *Early History of India*, 65, note, and 274.

[2] *Fourteenth Oriental Congress*, 1905, Algiers; Indian Section, 164.

not read Arabic, we need something more than what has been given to us even by Professor Sachau's admirable translation, and by the index of words of Indian origin which accompanies his edition of the text. It is not enough for us to have the Indian place-names and other words restored into Sanskṛit forms, actual or conjectural; we require an index which shall give us exact transliterations of the names, etc., as presented by Albērūnī in Arabic characters. He has cited, to a large extent, Prākṛit rather than Sanskṛit forms; and it is the Prākṛit forms which are so useful to us in tracing transitions from the Sanskṛit to the modern forms.

For the ancient geography, in short, as for everything else connected with the past of India, we are really dependent primarily and almost entirely on the epigraphic records. It is from that source that it must be mostly worked out. And we can only fill in additional details from extraneous sources, such as those discussed above, when we have arrived at some more definite idea of at least the general features from the indigenous materials.

The first desideratum now, in this line, is to index the published epigraphic records for all geographical details, and to prepare from them, and from such other native sources as can be conveniently worked in at the same time, an atlas of ancient India, a series of maps illustrating successive periods, which shall take the place of the long-since obsolete maps that are now available. Only in such a collection of maps shall we find the first reliable means of proceeding to apply properly any information that may be derivable from foreign sources. Many a result, advanced in the earlier inquiries indicated above, will be corrected in the course of compiling such a collection of maps; partly on the basis of better information already available, partly as the natural consequence of the care and thought that must attend the preparation of the compilation, if it is properly taken in hand. And many an interesting identification will be made at the same time, by the same means. It was only recently that the writer of the present account was able to show (JRAS, 1901. 537 ff.) that the ancient and famous Tagara exists to this day, known by the natural modern form of its former name, as Tēr, in the Nizam's Dominions (the misspelt Thair, Ther, Tair, of maps, etc.), though for more than a century of search and speculation its identity had escaped recognition. It is only still more lately that he has been able (see EI. 7. 223 ff.) to mark Lātūr in the same territory as the ancient Lattalūr, Lattanūr, the original home

of the Rāshṭrakūṭa kings of Mālkhēḍ, and to prove (see page 80 f. above) that Siālkōṭ in the Punjab is the ancient city Śākala, Sāgala, mentioned as She-ka-lo by Hiuen-tsiang.

There are, however, also other urgent desiderata in connexion with our geographical inquiries[1]. A great obstacle to making identifications—in some cases a factor which directly leads to erroneous results—is the difficulty of ascertaining the real forms of the modern place-names. Official spellings are of little, if any, value; there is no system, in ordinary official use, which gives us the critical details that we require. We need a series of compilations for the various Presidencies and other territorial divisions of India, framed on the lines followed in the official manual entitled *Bombay Places and Common Official Words* (1878), but prepared in a thoroughly critical manner and as the result of skilled inquiry, which shall give us, in the native characters as well as in transliteration, the actually correct forms of the modern names of all the principal towns, villages, rivers, and mountains. And, to supplement those compilations, we need others similar to, and arranged like, the *Postal Directory of the Bombay Circle* (1879), which shall show, in alphabetical order and in transliteration only, the name of every town and village in each postal circle, with its district, subdivision, and post-town.

E. Other Fields of Work

There is, thus, plenty of both original research and revisional work still to be done in connexion with, and by the help of, the epigraphic records. And the leading desideratum is, certainly, to get those records explored more fully and published in larger numbers.

But systematic co-operation in other lines of study would help very greatly, even towards a more accurate understanding of the records. And there are various ways in which much valuable assistance towards the ends that we have in view might be given by scholars who are not inclined to undertake the editing of the records, or even the detailed study of them.

In connexion with the general literature, there is still a great deal to be done in discovering, and bringing to notice by texts and translations, the historical introductions and colophons, the value of which has been indicated above (see page 19 ff.). Such materials are found freely in Southern India at any rate,

[1] For some fuller remarks on this topic, with an indication of the proper process to be followed in determining the true forms of modern place-names, see the observations by the present writer in JRAS, 1901. 549 ff.

and particularly in the Kanarese country. And results already published promise well for the future in this field of work.

We want a compilation of all the historical and geographical hints, and any other practical matter, that can be derived from the epics, the plays, the classical poems, and the collections of imaginative stories. And we want succinct abstracts of all the similar matter contained in the historical romances.

Life is too short for either the epigraphist or the historian to examine all these sources of information in the original texts, or even, in every case, to go thoroughly through translations of them. An editor of a text, on the other hand, could do all that is wanted in a day or two of extra work, the results of which would be embodied in an introduction and an index. And a student of any particular book might, on finishing his perusal of it, easily put together an instructive and valuable note which would be welcomed as an article in, for instance, the *Indian Antiquary*, in the pages of which it would at once attract the attention of those who could use it for general purposes.

The Paṭṭāvalis, the lists of the succession of the Jain pontiffs (see page 7 f. above), require to be examined more fully, especially with a view towards determining how far back we can carry the verses on which the earlier portions of them were based, and to what extent those portions of them are imperfect or erroneous and open to adjustment.

The geographical lists of some of the Purāṇas still remain to be exhibited, on lines similar to those adopted by the present writer in respect of the topographical list of the Bṛihat-Saṁhitā (IA, 22. 169). As yet we have, beyond that, only the list of the Bhāgavata-Purāṇa (IA, 28. 1). And, though it may be difficult to find many such lists the value of which is enhanced and made specific by our knowing the exact periods during which they were composed, as is the case with the list of the Bṛihat-Saṁhitā, still they will all come in usefully in some way or another. And there is, no doubt, many a Māhātmya or Sthalapurāṇa which will be useful for local geography and the identification of places, in the manner in which the Mahākūṭa-Māhātmya helped the writer of this account to establish the identity of the Vātāpi of the records, the capital of the great Chalukya dynasty of Western India, with the modern Bādāmi (IA, 5. 68; 8. 238).

We want a thorough exploration of all these subsidiary sources of information. And we want eventually a series of indexes to them similar to that prepared by Dr. Sörensen, and

now in course of publication, of the names in the Mahābhārata; but bringing together also all the information that can be gathered from them in respect of social customs, trade and commerce, administration, arts and industries, and all the other lines of inquiry which present themselves to different workers in various fields of research.

The Mahābhārata—a vast repository, not simply of theories about cosmogony and time and space, of lectures on the duties of the castes, and of philosophical disquisitions, but also of ancient tales and legends to which there are constant references in the inscriptions, of geographical details, and of many other practical matters—will, in some respects, be exhausted by Dr. Sörensen's work.

But the Rāmāyaṇa remains. We want an index for that. We want another for the Vēdas. We want others for the Kāvyas, the dramas, the prose romances whether historical or fictitious, the Rājataraṁgiṇī, and any other works of that class. In the Buddhist division, we want indexes for the Dīpavaṁsa and the Mahāvaṁsa, for the writings of Buddhaghōsha, for the Jātaka, the Lalitavistara, and the Divyāvadāna, and for many another work which cannot be indicated here. So, also, we want indexes of the Jain and other Prākṛit works. And in the vernacular division we want indexes of, for instance, the Pampa-Bhārata, the Pampa-Rāmāyaṇa, and any other Kanarese works which, issued in print, are available for treatment.

But the field is a vast one, and can be properly worked only on the principle of co-operation of labour, by breaking it up into manageable areas.

F. Concluding Remarks

Concluding remarks.

There is, in short, a vast amount of work still to be done, and by no means only in connexion with the inscriptions, but in all the various lines of research connected with the past of India.

We hope indeed, in particular, that the present exposition of the inscriptional bases of Indian research, and the accompanying sketch of the position at which we have arrived, may do something towards attracting more attention to the principal materials, the epigraphic records, and towards inducing more scholars to join us in exploiting them.

The means for carrying on this, the most essential, branch of the inquiry are ample. There is a special official journal, maintained expressly for the critical editing of the texts of the

inscriptions, with translations of them, and with such explanatory comments as can be appropriately given with the texts, instead of being worked up into special articles of greater length in the *Indian Antiquary* and in the journals of the various learned societies. That journal is the *Epigraphia Indica*, started in 1888 or 1889, and now in its eighth volume. It is in the charge of an editor whose duty and pleasure it is to welcome all contributions to it, to advise and encourage novices, and generally to co-operate in the satisfactory publication of all communications sent in to him for it. And by the size of its pages, and the freedom with which facsimiles are issued to accompany articles in it, it is better suited than any other journal to the preliminary exploration of the inscriptions, as a necessary precursor of an ultimate grouping of them in the volumes of the *Corpus Inscriptionum Indicarum.*

The pages of that journal have been filled to good purpose by those who have already been engaged in this line of work. But we want more workers to join us. And we look for recruits specially to the class of scholars who have a certain knowledge of Sanskṛit to start with; because, though most of the records are not in Sanskṛit, that tongue is more or less the key to the languages in which they were written, and a general knowledge of Sanskṛit literature and mythology is essential to a proper understanding of many of the allusions in the records.

At the same time, anyone who has made himself conversant with one of the vernaculars in its archaic form and ancient literature, has necessarily acquired, by that process, a considerable acquaintance with the Sanskṛit vocabulary, and can easily master, by general reading, what else is wanted. A preliminary knowledge of Sanskṛit itself, therefore, is by no means absolutely indispensable. As regards other leading languages, in Kanarese at any rate we have, in the Rev. F. Kittel's Kannaḍa-English Dictionary (1894) and Grammar of the Kannaḍa Language (1903), two most scholarly and admirable compilations, which have now placed it in the power of all western students to understand fully, and do justice to, the beauties of that highly polished and powerful tongue; and in the three volumes of Dr. Hultzsch's *South-Indian Inscriptions* we have a number of carefully edited versions, a study of which would go far towards removing any difficulties in the way of grappling with the epigraphic peculiarities of Tamiḻ.

It is no specially difficult matter now to approach the epigraphic records. And a very brief study of some of the

versions that have been most recently edited, and of the results brought forward from them, would quickly teach the lines on which it is desirable to deal with the records so as to produce the uniformity of treatment that is requisite, and would inevitably awake an interest that would induce a steady desire to join in the work that we have in hand. But we hope, also, that others may be induced to co-operate, by examining more methodically and critically the subsidiary sources of information, and by bringing forward their results in such a way as to make them available for being easily worked in with the more special results derivable from the epigraphic records.

The principal materials are the epigraphic records, the inscriptions. And a very brief study of some of them will suffice to show the specific importance of them, and to excite a desire to join in exploring them. But the subsidiary materials, also, are numerous and interesting. And anyone who will take any of them in hand systematically, with just enough knowledge of the results derived from the inscriptions to show the objects that require to be kept in view and the general lines of work that should be followed, can render assistance the value of which will be made clear enough when his results are put forward in an accessible form, even if it may not be fully realizable by him while he is actually at work.

J. F. FLEET.

List of Abbreviations

AR . . = *Asiatic Researches*; vol. i (1788) to vol. xx (1836–39).

ASI . . = *Reports of the Archaeological Survey of India*; Cunningham's Series, vol. i (1871) to vol. xxiii (1887); general index by V. Smith (1887).

ASSI . = *Reports of the Archaeological Survey of Southern India*; vol. i (1887), *The Buddhist Stupas of Amaravati and Jaggayyapeta*, by Burgess; vol. vi (1894), *South-Indian Buddhist Antiquities*, by Rea.

ASWI. = *Reports of the Archaeological Survey of Western India*; Burgess's Series, vol. i (1874) to vol. v (1883).

B.ESIP = Burnell, *Elements of South-Indian Palaeography*; 2nd edition (1878).

C.AGI = Cunningham, *Ancient Geography of India, the Buddhist Period* (1871).

C.BT . = Cunningham, *The Bhilsa Topes* (1854).

C.IA . = CUNNINGHAM, *Inscriptions of Asoka; Corpus Inscriptionum Indicarum*, vol. i (1877).

C.MG. = CUNNINGHAM, *Mahabodhi-Gaya*, i.e. *Mahabodhi, or the Great Buddhist Temple under the Bodhi Tree at Buddha-Gaya* (1892).

C.SB . = CUNNINGHAM, *The Stupa of Bharhut* (1879).

EC . . = *Epigraphia Carnatica*, RICE'S Series; vol. i (1886) to vol. viii (1904), vols. ix, x (1905), vol. xi (1903), vol. xii (1904).

EI . . = *Epigraphia Indica*; vols. i (1892) and ii (1894), edited by BURGESS; vol. iii (1894–95) and following ones, biennially, up to date, edited by HULTZSCH.

F.DKD = FLEET, *The Dynasties of the Kanarese Districts of the Bombay Presidency* (1896), in *The Gazetteer of the Bombay Presidency*, vol. i, pt. 2, pp. 277–584.

F.GI . = FLEET, *Gupta Inscriptions*, i.e. Inscriptions of the Early Gupta Kings and their Successors; *Corpus Inscriptionum Indicarum*, vol. iii (1888).

H.SII . = HULTZSCH, *South-Indian Inscriptions*; vol. i (1890), vol. ii (1891–95), vol. iii, pt. 1 (1899), pt. 2 (1903).

IA . . = *Indian Antiquary*; vol. i (1872) to vol. xiii (1884), edited by BURGESS; vol. xiv (1885) to vol. xx (1891), by FLEET and TEMPLE; vol. xxi (1892) and following ones, up to date, by TEMPLE.

JA . . = *Journal Asiatique*; vol. i (1822), and following ones up to date.

JAOS . = *Journal of the American Oriental Society*; vol. i (1849), and following ones up to date.

JASB . = *Journal of the Asiatic Society of Bengal*; vol. i (1832), and following ones up to date.

JBBRAS = *Journal of the Bombay Branch of the Royal Asiatic Society*; vol. i (1841–44; reprinted 1870), and following ones up to date.

JRAS . = *Journal of the Royal Asiatic Society*; first series, vol. i (1834) to vol. xx (1863); new series, vol. i (1865) to vol. xxi (1889); subsequent volumes, no series or numbers, annually, from 1890 up to date.

PSOCI = *Pali, Sanskrit, and Old-Canarese Inscriptions from the Bombay Presidency and parts of the Madras Presidency and Maisur*; a collection of 286 photographic and lithographic reproductions of inscriptions, compiled by FLEET and BURGESS, with an explanatory analysis by FLEET, and largely based upon a collection of photographs of inscriptions in Mysore made by DIXON and published in 1865, and upon similar photographs in HOPE'S *Inscriptions in Dharwar and Mysore* (1866), and *Architecture in Dharwar and Mysore* (1866).

VOJ . = *Vienna Oriental Journal*, sometimes cited as WZKM, i.e. Wiener Zeitschrift für die Kunde des Morgenlandes; vol. i (1887), and following ones up to date.

ZDMG = *Journal of the German Oriental Society*, Zeitschrift der Deutschen Morgenländischen Gesellschaft; vol. i (1847), and following ones up to date.

CHAPTER II

PREHISTORIC ANTIQUITIES

KNOWLEDGE of the condition of mankind in the dim ages of the past which lie beyond the ken of history or tradition is attainable only by scientific interpretation of the scanty material relics of human workmanship—the tools, weapons, tombs, and pottery—which survive from those remote times. Archaeologists are agreed that the successive stages of nascent civilization in the prehistoric world are best distinguished by noting the degrees of progress in the metallurgic arts. Introductory.

The period during which iron was, as it now is, in familiar use is known as the Iron Age. The next preceding period, when implements now commonly made of iron were made of bronze, is called the Bronze Age. The still earlier period, when men knew not the use of metals, but were compelled to rely for all purposes of war, the chase, and domestic industry upon rude instruments of wood, bone, or stone, is designated the Stone Age.

In many countries two subdivisions of the Stone Age are clearly to be distinguished. The earlier, termed the Palaeolithic or Old Stone Age, is characterized by chipped stone implements, rude in form, and frequently associated with the remains of extinct animals. The later, termed the Neolithic or New Stone Age, is characterized by the prevalence of a higher type of implements, commonly ground or polished, and associated with remains of the fauna now existing. The palaeolithic men were ignorant of the potter's art and built no sepulchres. During the neolithic period, pottery, at first hand-made, and afterwards turned on the wheel, was in constant use, and the dead were honoured by elaborate tombs, frequently built of massive stones.

By imperceptible gradations the Neolithic passes into the Bronze, and the Bronze into the Iron Age, but between the Palaeolithic and the Neolithic Ages a great gulf seems to be fixed. Most parts of Europe, Western Asia, and Egypt cer-

tainly passed in prehistoric times through all these four ages, or stages of civilization; but the course of evolution has often been less regular, and many examples of abrupt transition from the Stone Age to the Iron Age might be cited. Numerous savage tribes were recently, and some, perhaps, still are, ignorant of the use of metal, and have remained in the stage attained by the ancestors of the civilized races many thousands of years ago. In India generally the Bronze Age is missing, and the transition from polished stone to iron was effected directly, but in some parts of the country tools and weapons were made of pure copper before iron came into ordinary use.

The Stone Age in India. The first clearly recognized discovery in India of an implement belonging to the Stone Age was made by Mr. Le Mesurier in 1861. Since that date numerous writers have accumulated observations, and a considerable mass of material for a systematic account of Indian prehistoric antiquities is now in existence, but the task of writing such an account has not yet been undertaken. The officers of the Archaeological Survey, with the notable exceptions of Mr. Alexander Rea and the late Mr. A. C. Carlleyle, have been too much occupied with the study of historic monuments to devote attention to the obscure relics of a more remote past, and the observations on which a treatise descriptive of prehistoric India might be based remain buried in the pages of technical periodicals.

The following sketch, which must necessarily be brief, may perhaps be of service by stimulating interest in the subject, and indicating the lines of future research.

Palaeolithic implements. The geological evidence in India, as in Europe, indicates the existence of a wide gap of untold centuries between the remains of palaeolithic and those of neolithic men. Between the Neolithic and the Iron Ages no such gap exists. In the prehistoric settlements of the Deccan Mr. Bruce Foote has observed that these two stages of civilization overlap, and has thus obtained direct evidence that the people of the ancient Iron Age were direct descendants of their stone-using predecessors. Many of the existing tribes and castes are no doubt descended from the neolithic peoples, but there is no evidence of continuity between the palaeolithic men whose remains are found in the river gravels and any subsequent element of the population.

Only two cases in India seem to be known where stone implements have been found in fossiliferous beds associated

with the remains of extinct animals. Mr. Hacket was fortunate enough to discover a well-made ovate instrument of chipped quartzite at Bhutra in the Narbadā Valley (about N. lat. 23°), lying in undisturbed post-tertiary gravels containing the bones of *Hippopotamus namadicus* and other extinct mammals. Mr Wynne obtained an agate flake from similar gravels in the Godāvari Valley (*G. I.*, p. 386; pl. xxi, 1, 2). Most of the implements which must, for geological reasons, be classed as palaeolithic, have been found in laterite deposits, which are, unfortunately, destitute of fossils. Mr. Bruce Foote has been very successful in detecting rude implements, usually of quartzite, in beds of detrital laterite—a ferruginous rock overlying gneiss—in Southern India, and has traced their distribution over an area comprising eight degrees of latitude (N. lat. 10° to 18°). They are especially numerous near Madras city, and in the neighbourhood of Ongole in Guntūr District. More systematic search will probably reveal them in many other localities. Implements similar in form and material, but apparently of neolithic age, have been obtained by several observers in large numbers among the Kōn ravines of South Mirzāpur (N. lat. 24° 25′).

The distinction between palaeolithic and neolithic antiquities should be based rather on the nature of the situations in which they are respectively found than on the style of workmanship, which is a very unsafe guide. The implements from the Kōn ravines and those with which the great monoliths of Stonehenge were dressed, although both of neolithic age, are quite as rude as those found in the Madras laterite, which must undoubtedly be classed as palaeolithic, and are far inferior to many of the finely chipped implements from the river gravels of France and England, to which a very remote antiquity is assigned.

Ossiferous caves, like those which in Western Europe have yielded innumerable relics of palaeolithic times, seem to be unknown in India.

Bone implements, so common in Europe, are in India very rare. Mr. Carlleyle excavated a serrated fish-bone, perhaps an arrow-head, from Gangetic alluvium in Ghāzīpur District, lying below a stratum which contained polished neolithic tools (*A. S. R.*, xxii, 102).

All that is known at present about palaeolithic man in India may be summed up in the brief statement that rude stone implements found in laterite beds and ossiferous gravels south of parallel 25° of north latitude reveal the existence of a race of men contemporary with animals now extinct. Even the

skulls and skeletons of these men, who made no pottery and built no tombs, have disappeared. The geological problems connected with the implement-bearing beds of India require investigation much fuller than that which they have yet received.

Neolithic implements.

Implements of the neolithic period abound in India. They have been observed in the Peninsula from the extreme south to parallel 18° of N. latitude; and all along the southern border of the Gangetic Valley in the Vindhyan and other ranges which separate the plains of Northern India from the Deccan the soil 'teems' with them. Mr. Cockburn notes that he picked up fifty chert knives and two broken celts in a field near his house at Bāndā in Bundēlkhand, and that he does 'not remember ever having gone out on a search for implements to return unrewarded.' In Bengal and the Punjab stone implements seem to be rare. Only two finds of celts from the latter Province are recorded, but when carefully searched for others will doubtless be found. The antiquities of the Punjab, historic and prehistoric, have received scant attention. The hills at Rohrī on the Indus in Sind yield copious supplies of singularly large and perfect flakes of nummulitic flint, as well as of the cores from which the flakes were struck. The Rohri implements, of which many specimens may be seen in English museums, are probably of neolithic age. Examples of neolithic implements have been found at a few sites in the Gangetic alluvium, as well as among the hills and deserts of Rājputāna, and probably exist in every Indian Province.

The various forms of the Indian implements on the whole are identical with those familiar to European antiquaries; but a shouldered celt with an edge like that of a carpenter's plane, which is common in the Irrawaddy Valley of Burma, and occasionally occurs in the hilly regions of Western Bengal, seems to be unknown in Europe.

Pygmy flints.

The so-called 'pygmy flints,' believed to be of neolithic age, which are now known to occur in England and other countries, were first discovered by the late Mr. A. C. Carlleyle in 1867–8 at a pass in the Vindhya Hills about thirty miles south-south-west of Allahābād. Subsequently the same explorer obtained thousands of these tiny implements in Baghelkhand, Rewah, and the southern parts of Mirzāpur District. The richest treasures of this class were found under shallow deposits

of earth or sandy gravel on the floors of caves or rock-shelters, associated with the ashes and charcoal of hearths and lumps of ruddle or haematite. Rude paintings made with ruddle on the walls and roofs of the caves seem to be coeval with the implements. A few specimens were found in tumuli containing entire skeletons and coarse pottery. Mr. Carlleyle does not state whether the pottery was hand-made or turned on the wheel. The little implements, which vary in length from half an inch to an inch and a half, comprise delicately made arrow-heads, crescents, and sundry pointed and rhomboidal forms. The material is frequently chalcedony. Exactly similar miniature implements occur at several stations in England, and in the valley of the Meuse in Belgium. The numerous specimens excavated by the Rev. R. A. Gatty from sand-drifts at Scunthorpe in Lincolnshire are remarkable for their extremely minute size, the smallest being no more than three-sixteenths of an inch in length. The Scunthorpe sites appear to be, like the Vindhyan ones, the floors of dwellings. The occurrence of these miniature implements in immense numbers on the sites of huts indicates that they must have served purposes of ordinary life; but what those purposes were it is difficult to determine. Most probably they were used by being fitted into wooden holders and handles of various kinds, and so made to serve a great variety of functions. In some parts of Australia the natives still employ, or recently employed, minute flakes of flint as arrow-heads, knives, &c., by fitting them to wooden holders with the aid of strongly adhesive resin. The manufacture of the 'pygmy flints' evidently extended over a long period, and there is reason to believe that the earlier examples go back to the beginnings of the Neolithic Age. It is possible that they are the memorials of the survivors of palaeolithic men, working as the slaves or dependents of the more advanced neolithic races[1]. If this view should find support, the common belief that a great gap divides the palaeolithic from the neolithic period will require modification.

Mr. Bruce Foote has recorded interesting brief descriptions of **Implement factories.**

[1] Special references for 'pygmy flints' are:—Evans, *Ancient Stone Implements*, 2nd ed., pp. 276, 325, fig. 232, D, E, F. Gatty, article in *Man*, Feb. 1902; and MS. notes of the late Mr. Carlleyle. De Pierpoint, 'Observations sur de Très Petits Instruments en Silex' (*Bull. Soc. Anthrop. de Bruxelles*, tome xiii, 1894–5). V. A. Smith, 'Pygmy Flints' (*Ind. Ant.* 1906). The British Museum possesses an excellent set of Vindhyan specimens. The Pitt-Rivers Museum at Oxford and the National Museum at Dublin also have sets from Mr. Carlleyle's collection.

the sites of several neolithic settlements and implement factories in Southern India. The implements were polished on gneiss rocks, which exhibit grooves 10–14 inches long, and nearly 2 inches deep. The pottery found in abundance at these settlements is described as being all wheel-made, and 'of very high class for Indian pottery,' although not to be compared with Etruscan or Greek ware. Stone beads also occur, as well as pieces of haematite, used apparently for the manufacture of pigment. A systematic account of the neolithic settlements in the South is much to be desired.

'Cinder-mounds.' The 'cinder-mounds' of Southern India, of which about a dozen are known, for the most part in the Bellary District of Madras, present a puzzling problem. Mr. Sewell gives plausible reasons for believing the great mound at Nimbāpur near the ruined city of Vijayanagar to have been the scene of the awful sacrifices of women, up to the number of five hundred at a time, which used to be offered at royal funerals as late as the sixteenth century. Mr. Bruce Foote, on the other hand, maintains that all the 'cinder-mounds' are of neolithic age, and is supported in his opinion by the fact that the Būdigunta mound, which is certainly the result of wholesale holocausts of animals, actually yields neolithic implements. Possibly the 'cinder-mounds' may extend over a very wide range of time. The problem of their origin cannot be solved until they have been systematically surveyed and explored.

'Cup-marks.' The class of prehistoric objects known as 'cup-marks' and 'ring-marks,' described by Sir J. Y. Simpson, with special reference to Great Britain, in his work on *Archaic Sculpturings upon Stones and Rocks*, is well represented in India. This branch of archaeology has been chiefly studied by Mr. H. Rivett-Carnac, C.I.E., whose publications give full details, and discuss the various theories propounded in explanation of the markings, which are probably to be referred, for the most part, to neolithic times.

Ruddle drawings. The ruddle, or haematite, drawings discovered by Carlleyle in the caves of the Vindhyan Hills have been referred to as being probably in part coeval with the neolithic 'pygmy flints.' Similar drawings, which depict hunting scenes, occur in the Kaimur Hills. Carlleyle, unfortunately, never published any detailed account of his discoveries. The primitive form of the weapons delineated on the walls of the Kaimur caves supports the hypothesis that the drawings are of neolithic age (*J. R. A. S.*, 1899, p. 89). On sheltered surfaces the stain produced by ruddle may last for an indefinite number of cen-

turies, and it is quite possible that the drawings in the Kaimur caves may be 3,000 years old, or even more.

In prehistoric, as in modern India, various methods for the disposal of the dead were adopted. The men of palaeolithic times probably abandoned their dead in the forests, as the Oritae of Gedrosia (Makrān) continued to do in the days of Alexander the Great. In the Neolithic Age burial was perhaps the rule, and it seems certain that the practice of burial is older than that of cremation. Tombs.

Examples of sepulchres which can be referred with confidence to the neolithic period are rare in India, where most of the megalithic tombs belong to the Iron Age. The stone implements from the Kōn ravines in South Mirzāpur, already mentioned, are associated with neolithic interments. Another certainly neolithic cemetery near the town of Mirzāpur was visited by Mr. Cockburn, who was present at the excavation of two graves. The grave fully excavated was 6 or 8 ft. deep, enclosed in a stone circle about 12 ft. in diameter, and contained the skeleton of an adult male of large size, lying north and south on a thick stone slab. A flat dish of 'glazed' pottery was placed at the head of the skeleton, and a similar vessel lay at each corner of the tomb, which also contained 'a long narrow lachrymal vase of green glass about 7 inches long[1].' In the second grave opened two stone hammers and sundry flint flakes were found.

Captain Cole found two fragments of stone implements associated with piles of pottery, evidently wheel-made, in a cemetery comprising fifty-four tombs at Māshalli in the Kolār District of Mysore. No metal object was discovered in this cemetery, which must be referred to a late period of the Neolithic Age (*I. A.*, ii, 86). At Daosa, in the Jaipur State of Rājputāna, Mr. Carlleyle observed rude stone implements in cairn tombs (*A. S. R.*, vi, 107, pl. ii).

The tombs at Pallāvaram near Madras city are earthen mounds covering terra-cotta coffins, which are of two kinds, oblong and pyriform. The former, about 6 ft. in length, were used for females, who were buried in the extended position. The latter, about 2¼ ft. in height, were used for males, who were buried in the contracted position. Large quantities of pottery, apparently

[1] The pottery probably was not really glazed. The ancient Indian substitute for glazing was a smear produced from the juice of *Abutilon indicum*. Glass was known in Egypt and Babylonia from a very early date. Mr. Peters found specimens at Nippur which are assigned to the thirteenth and fourteenth centuries B.C. (*Nippur*, p. 134).

wheel-made, were found in these tombs, but no objects of either stone or metal[1].

Oblong terra-cotta sarcophagi, standing on short legs, similar to those used for the interment of females at Pallāvaram, have been discovered at various places in the Madras Districts of Chingleput, Nellore, South and North Arcot, sometimes associated with iron implements. The Pallāvaram examples may be of neolithic age. The Indian oblong sarcophagi are practically identical in form with similar objects found at Gehrāreh near Baghdād (*I. A.*, v, 255). This fact is one of many indications connecting archaic Indian civilization with that of Babylonia and Assyria, which suggest tempting ethnological speculations.

Megalithic tombs in great variety of form abound throughout Madras, Bombay, Mysore, and the Nizām's Dominions. They generally contain iron implements, and are evidently of very various ages, some being truly prehistoric and of remote antiquity, while others may be described as modern. The examples in the Nīlgiri Hills, explored by Mr. Breeks, extend over many centuries down to 1596, which is the date (Saka 1518) of a Tamil inscription on one.

The fine bronze vases and other ornamental objects found in the more ancient tombs on the Nīlgiri Hills evidently date from the early centuries of the Christian era, when the Kurumba, or Pallava, power commanded an extensive seaborne trade. The bronze used is a malleable alloy, composed of copper (70·11) and tin (29·89 per cent.)

The human remains found in the megalithic tombs have been sometimes buried, but, perhaps, more frequently cremated. Occasionally, a single sepulchre contains traces of cremation as well as of burial.

Examples of urn-burial, not of cremated ashes, but of the whole body, occur at places as wide apart as Brahmanābād in Sind and Tinnevelly District at the extremity of the Peninsula. Large jars, narrow at the neck and pointed at the bottom, were used, and the body must have been reduced in bulk either by dissection or by pounding before it could be passed through the narrow neck. Similar jars occur in Babylonia, where they were coated with bitumen on the inside. The Indian examples substitute for the bitumen a black smear, or false glaze, prepared from the juice of the *Abutilon indicum*.

[1] Mr. Rea's report (illustrated) in *Proc. Madras Govt.*, *Public*, No. 1135, dated Aug. 11, 1887. The discovery is noticed in *J. A. S. B.*, 1888, pt. ii, p. 48.

The great cemetery at Adichanallūr, in Tinnevelly District, partially explored by Mr. Rea, covers an area of 114 acres, and it is estimated that about 1,000 urns are buried in each acre. The presence of a few stone implements indicates that parts of this necropolis may be very ancient, but most of the tombs contain iron implements and bronze ornaments of comparatively recent date. Mr. Rea's collection made at this site includes seven gold ornaments, which very rarely occur in Indian tombs. The artistic and ethnological problems suggested by the discoveries in Tinnevelly District still await discussion. Adichanallūr.

India, as already observed, had no Bronze Age; that is to say, weapons and tools now made of iron or steel were very rarely made of bronze. That material was ordinarily employed only for vases, lamps, and other ornamental purposes, and did not come into common use until long after iron was familiar. But there are clear indications that in a considerable portion of Northern India tools and weapons made of practically pure copper were in use for a time, and the facts fully warrant the assumption that a Copper Age intervened between the Neolithic and Iron Ages. Copper implements.

'The most important discovery,' observes Sir John Evans, 'of instruments of copper as yet recorded in the Old World is that which was made at Gungeria in Central India' in 1870. The treasure, which was found carefully packed in a pit near Gungeria, a village in the Bālāghāt District of the Central Provinces (about N. lat. 22°), consisted of 424 copper implements, weighing 829 lb., and 102 thin silver plates, weighing 6 lb. The copper articles include 'bar-celts' more than 2 ft. long, and 'flat celts' of very primitive forms. Twenty-one of these implements are in the British Museum, and no two of them are identical in shape. The specimen with the most widely splayed edge closely resembles an Irish bronze celt in the Franks collection, and a copper one in the National Museum of Ireland; while other examples recall Babylonian, Egyptian, and even Peruvian patterns. On the whole, they resemble Irish specimens more closely than those of any other country.

The silver plates comprise circular discs and figures of a bull's head with horns (or ? ears) turned down, probably intended for attachment to sacred objects. Notwithstanding the presence of silver in this unique hoard, the probability is that a remote date must be assigned to both the copper

tools and the silver ornaments. The Irish copper celts, many of which are almost identical with Gungeria specimens, are assigned to the period between 2,000 and 1,500 B.C., and it is quite possible that the Indian copper implements and weapons may be as old as the Irish. Silver, although perhaps unknown in the South before 600 or 700 B.C., may have been introduced into the North by land routes at a much earlier period. So far as is known, the metal was never produced in considerable quantity from Indian mines; it has always been an important item in the list of imports. Copper, on the other hand, is widely diffused in India, and the sites of ancient mines are known. The reddish *ayas* of the Veda cannot have been either iron or bronze, and must have been copper. The copper implements of the Gungeria hoard, and the fine celts, swords, and spear-heads of the same material, found from time to time in the Cawnpore, Fatehgarh, Mainpuri, and Muttra Districts in the Gangetic Valley, were probably made of Indian copper.

Iron.

The approximate date of the introduction of a knowledge of iron into India cannot at present be determined. This metal, which was in common use in Egypt in the seventh century B.C., does not appear there much before 800 B.C. This latter date may be the anterior limit for the appearance of iron in Southern India, which was in communication with Egypt from very early times, while still severed from Northern India by an almost impassable barrier of mountain and forest. But in Babylonia iron was known from remote antiquity, and it is possible that the people of Northern India may have been familiar with the metal long before it became common in the isolated South. At the time of Alexander's invasion (326 B.C.) the armed nations of Northern India were far superior in the art of war to the other nations of Asia, and were as well versed in the use of iron and steel as the Greeks themselves. Quintus Curtius mentions that the chiefs of the Punjab presented Alexander with 100 talents of steel (*ferrum candidum*). The Greek accounts of Indian civilization as a whole imply that the nations of the Punjab and Sind in the fourth century B.C. had long emerged from the conditions involved in the use of stone or copper tools and weapons. The Iron Age in Northern India may well go back to 1500 or even 2000 B.C.

VINCENT A. SMITH.

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CHAPTER III

ARCHAEOLOGY OF THE HISTORICAL PERIOD

THE subjects of Architecture, Numismatics, and Epigraphy, being treated separately elsewhere, are excluded from consideration in this chapter, which will be chiefly devoted to an outline of the history of sculpture and painting in India. The minor decorative arts will also be noticed briefly. Inasmuch as a line, more or less arbitrary, must be drawn somewhere, the termination of the reign of Aurangzeb, the last Great Mogul, in A.D. 1707, has been chosen as the boundary between the old and the new. The existence of the buildings referred to is assumed, and attention is confined to the subsidiary arts employed in their decoration. The limitations of space forbid any attempt at detailed description, and readers who desire to study the subject in detail are referred to the numerous descriptive works indicated in the note on authorities at the end of the chapter. For the same reason, want of space, it is impossible to discuss the history and prospects of archaeological inquiry in India, or to explain the measures taken by the Government of India, especially during the Viceroyalty of Lord Curzon, for the survey, conservation, and partial restoration of ancient monuments[1]. Scope of the chapter.

The historical age begins in Northern India about 600 B.C., and in Southern India at a much later date, which can hardly be defined with precision. If it is permissible to judge by the known state of Indian civilization in 500 B.C. and the help of European analogies, some of the neolithic remains briefly noticed in the preceding pages may be assumed to go back as far as 2000 B.C. In the present state of knowledge it is impossible to trace the connexion between the relics of prehistoric Transition from prehistoric times.

[1] A 'Short History of the Archaeological Department' is appended to the *Annual Progress Report of the Archaeological Survey Circle, North-Western Provinces and Oudh*, for the year ending March 31, 1900, printed at the Government Press, Allahābād. Lord Curzon's address to the Asiatic Society of Bengal, on Feb. 6, 1900, is reprinted as Appendix H in the same volume.

and those of historical ages, and we must be content in practice to treat the remains left by the peoples who fall within the purview of history as if they were separated by a wide gap from those of unrecorded prehistoric times. Of course, as a matter of fact, no such gap really existed. The civilization of historical India is undoubtedly based on that of the neolithic and copper ages, as modified by the new arts introduced from time to time by foreign invaders; but the connexion has not been clearly worked out, and the story of the origins of Indian civilization has yet to be written.

The earliest Indian building.

The earliest Indian building to which an approximate date can be assigned is the *stūpa* at Piprahwa on the Nepāl frontier, explored by Mr. W. C. Peppé in 1898. Very strong reasons exist for assigning this building to 450 B.C. in round numbers, shortly after the decease of Gautama Sākyamuni, commonly known as Buddha. The edifice, which was almost perfect when opened, is a solid cupola, or domed mass, of brickwork, 116 feet in diameter at the base, and about 22 feet high, built round and on a massive stone coffer in which relics of the body of Buddha were enshrined by his tribesmen, the Sākyas [1]. The bricks are huge slabs set in mud mortar, of which the largest measure 16 × 11 × 3 inches. Such a structure is obviously a development of the earthen tumulus, kiln-baked brick slabs being substituted for earth in order to ensure permanency.

Buildings of similar construction, but probably two or three hundred years later in date, situated at Bhattiprolu and Gudivāda in the Kistna District of Madras, have been described by Mr. Rea.

State of civilization 450 B.C.

The construction and contents of the Piprahwa *stūpa* offer valuable testimony concerning the state of civilization in Northern India about 450 B.C., which is quite in accordance with that elicited from early literary sources. Even in the much more ancient Vedic age the civilization of the North-Western Indians was so far advanced that Professor Wilson could describe it as 'differing little, if at all, from that in which they were found by the Greeks at Alexander's invasion' (326 B.C.). We need not therefore feel surprised when the Piprahwa *stūpa* gives us definite information that the Indians on the frontier of Nepāl in 450 B.C. included skilled masons, accomplished stonecutters, and dainty jewellers. The masonry of the *stūpa* is excellent of its kind, well and truly laid; the great sandstone coffer could not be better made; and the

[1] For another interpretation, see Fleet in *J.R.A.S.*, 1906, p. 149.

ornaments of gold, silver, coral, crystal, and precious stones which were deposited in honour of the holy relics, display a high degree of skill in the arts of the lapidary and goldsmith. The brief inscription on one of the vases in the coffer is of inestimable value as fixing an approximate date in the history of the development of Indian writing, and as a tangible refutation of the theories once fashionable which would not allow a knowledge of writing even to the Indians of the fourth century B.C.

Wooden architecture. Although the art of constructing substantial edifices of brick masonry was well understood in Northern India four or five centuries before Christ, and must have been introduced, perhaps from Babylonia, at a much earlier date, there is good reason for believing that the ornamental buildings of ancient India were mainly constructed of timber. Brick foundations and substructures were probably common; but the whole history of Indian architecture proves that the superstructures of the early buildings possessing architectural features must have been, as a rule, executed in wood, like the modern Burmese palaces. The Piprahwa *stūpa* is a monument of engineering rather than of architectural skill.

Early period of Indian art, 250 B.C. to A.D. 50. It is possible that when the really ancient sites of India, such as Taxila and Vaisāli, shall be explored, remains of buildings assignable to the fourth, fifth, and sixth centuries B.C. may be discovered. Such remains, if ever found, are likely to consist chiefly of *stūpas* and the plinths or substructures of wooden superstructures which have long since disappeared. But the results of exploration of these ancient sites, so far, have been disappointing; and in our present state of ignorance a great gap, to which no material remains can be assigned, exists between the date of the Piprahwa *stūpa* and that of Asoka Maurya, two centuries and a half later. In fact, the history of Indian art may be said to begin in the reign of Asoka (272–231 B.C.), and all the known remains assignable to his period are probably later than 260 B.C. These are sufficiently numerous and well preserved to give a good notion of the state of the arts during the reign of the great Maurya emperor. The Maurya style, subject, of course, to considerable modification owing to the lapse of ages and the variety of local fashions, lasted for several centuries, and the early period of Indian plastic art may be described with a close approximation to accuracy as extending from 250 B.C. to A.D. 50. Most of the remains date from the second and third centuries B.C.

Distribution of remains of Early Period.

The ruins of the buildings of this period are almost without exception associated with the Buddhist religion. The best preserved are the numerous *stūpas* and connected buildings at Sānchī in the State of Bhopāl, Central India. The buildings at Bharhut (more accurately, Barhut) in the State of Nāgod, Central India, have been destroyed, but the sculptures rescued from that locality are of great value and interest. The ruins at the ancient imperial capital, Pātaliputra (Patna), and at the Mahābodhi temple, commonly called Buddha Gayā, although fragmentary, are important. The ancient city of Mathurā (Muttra) on the Jumna, and some of the oldest cave-temples in Western India, contribute examples of sculpture, while the numerous monolithic pillars erected by Asoka in the home provinces of his empire afford valuable evidence of the state of the arts in his time.

Evolution of the *stūpa*.

The brick *stūpa*, originally an exact copy of a low earthen sepulchral tumulus, naturally showed a tendency to increase in height and grandeur as builders gained confidence and skill in the manipulation of extensive works in brick and stone. The Piprahwa *stūpa*, with a basal diameter of 116 feet, stands only about 22 feet high, and even if it once possessed ornamental appendages at the top, was probably never more than 30 feet in height. The great tope or *stūpa* at Sānchī, which may have been built in the reign of Asoka, is much higher in proportion, the height being about 54 feet, and the basal diameter of the dome on the top of the plinth 106 feet. As time went on the height of *stūpas* was gradually increased until the original cupola form was lost, and that of a tower substituted. Simultaneously with the change in form, great progress was made in the decoration of the originally plain brick tumulus.

Stone railings.

A very important addition took the form of a stone railing, which enclosed a perambulation path and sacred precinct around the monument. The mode of construction of these stone railings permits no doubt that they were copied from wooden models, of which naturally no remains exist. The most ancient railings discovered are perfectly plain post and rail low fences about 3½ feet in height, made of stone instead of wood. The railing of the great *stūpa* at Sānchī, though higher, is of this kind, and similar plain fencing has been discovered at Pātaliputra. Some of the examples may be earlier than the age of Asoka. But even in his time ornament was applied to the railing at Mahābodhi, which was adorned with friezes, panels, and bosses exhibiting a consider-

able amount of artistic skill. The approximate date of the Mahābodhi railing is fixed by the dedicatory inscriptions, which are incised in characters closely resembling those of the Asoka edicts. The bosses are usually in the form of an expanded lotus flower, treated with much variety in detail, and sometimes exhibiting figure subjects in the centre. The friezes on the coping show processions of animals, many of which are weird mythical creatures, often winged. Interesting domestic scenes are depicted on some of the pillars.

Hellenistic and Persian influence.

Although the details of real life in the sculptures of the early period are invariably purely Indian, the compositions as a whole, and the representations of mythical monsters, are certainly Hellenistic, and exhibit the distinctive characteristics of Hellenistic art. The practice of decorating buildings with 'pictures in relief' might well have been borrowed from Persia; but the composition and style of the Indian work are so remote from the Persian, and so akin to the Alexandrian, that it is impossible to doubt that the Indian artists imitated European rather than Iranian models. The Alexandrian school loved reliefs essentially similar to those of Sānchī and Bharhut, and the words in which Professor Ernest Gardner describes the bas-reliefs of Alexandria apply to many Indian compositions.

'There is usually,' he observes, 'a group of figures in the foreground . . . often the scene is from actual country life. . . . The background, which is the most characteristic portion of these reliefs, varies so as to be appropriate to the subject. Sometimes it is purely architectural, sometimes it represents nothing but rocks and trees, treated with a strange combination of naturalism and conventionalism. More often it consists of a mixture of the two—a country scene, with peasants' huts and rustic shrines scattered over the landscape, or a group of buildings with trees and bushes lending variety to their stiffer outlines. . . . The flowers on the rocks, the leaves of the trees, are often carved not only with the utmost care, but with botanical accuracy. The country is seldom left untenanted by man or by his imaginings: small shrines or altars, thyrsi, and masks or other symbols, are scattered freely over the scene. . . . They [the reliefs] are interesting . . . because they show us an undoubted example of the influence of painting on sculpture[1].'

Any reader who will take the trouble to compare Professor Gardner's description with the published plates illustrating the Sānchī and Bharhut reliefs cannot fail to perceive that, with the substitution of Indian for Greek details, the description strictly applies. The drawing and execution of the Indian

[1] Ernest Gardner, *A Handbook of Greek Sculpture*, p. 440.

'pictures in relief' are, of course, much inferior to the Greek, but the general principles of the composition in both are identical. The obviously pictorial character of the Indian sculptures is probably due to direct imitation of the Hellenistic sculptures based on painted models, rather than to the existence of a lost school of Indian painting.

The intimate commercial and diplomatic intercourse which undoubtedly existed between the Maurya empire of India and the Hellenistic kingdoms of Asia, Africa, and Europe permits of no difficulty in understanding how the artistic conceptions of the West reached India. During the Maurya period (321–180 B.C.), and for some centuries later, active intercourse by both sea and land was maintained between East and West, and endless opportunities existed for the importation of European art motives. The Hellenistic is not the only foreign element in ancient Indian art. The influence of Persia is apparent, and the columnar architecture of the Achaemenian monarchy supplied the models for Asoka's monolithic pillars and many architectural and sculptural details. The capitals of Asoka's pillars present a curious combination of Hellenistic and Persian elements. The style of the most ancient Indian works of art in stone being a compound of Hellenistic, Persian, and Indian elements, any descriptive name would be inconveniently cumbrous; and it is better to designate the first school of Indian sculpture, extending from about 250 B.C. to A.D. 50, by a simple chronological appellation and to call it the Early School.

Bharhut. The infinite capacity of the stone railing for decoration having been recognized, the ancient plain fence was quickly transformed into an elaborate screen of considerable height, giving ample space for a picture gallery. The railing of the *stūpa* at Bharhut (Barhut), nearly a hundred miles south-west from Allahābād, erected between 200 and 150 B.C., stood seven feet high, and every part of it, posts, rails, and coping, was covered inside and outside with elaborate pictures in bas-relief. The Bharhut sculptures, like the slightly later frieze of the great altar at Pergamum, possess special interest because many of them are provided with contemporary labels, and thus, so far as they go, are equivalent to an illustrated treatise on Buddhist mythology. About fifty of the subjects are taken from the collection of 510 *Jātakas*, or Birth Stories, and twenty-six of them have been definitely identified with stories in the Pāli books. These stories, which form the basis

of much of the current European beast-fable and folk-lore literature, assume the form of narratives of the adventures which befell Buddha in previous states of existence.

The Bharhut reliefs are invaluable and interesting, not only as a commentary on and illustrations of old-world literature, but as vivid representations of the daily life of India more than 2,000 years ago. The houses of the people, the shrines of the gods, the hermitages of the saints, as well as the carts, chariots, boats, dress, arms, and ornaments in ordinary use, are all displayed with the utmost realism and distinctness. The purpose of the artists, like that of the mediaeval designers of stained glass, was the edification of the faithful by a lively presentation of the sacred stories in such a fashion that man, woman, or child, literate or illiterate, could understand it. Aesthetic beauty was not aimed at as an end by itself; whenever it is attained, it must be regarded as a by-product subsidiary to the faithful rendering of the legend. Considered with reference to their purpose, the Bharhut reliefs must be pronounced a success. They tell their story well; and as against this achievement of their main purpose, faults of composition, drawing, and perspective are of small account.

The sculptures, discovered by Sir Alexander Cunningham, were rightly removed to Calcutta, where they now adorn the Imperial Museum. If they had been left on the spot, they would have shared the fate of so many of the Amarāvatī marbles, and would have been ruthlessly destroyed by the villagers.

Although detailed description of the Bharhut reliefs is not within the scope of this chapter, a few of the specially interesting subjects may be alluded to. A nearly life-size figure of an infantry soldier, armed with an extraordinarily broad sword, is a most apposite commentary upon the description of Chandragupta Maurya's infantry as given by Megasthenes, and may be compared with the figure of the similarly armed but differently dressed soldier at Sānchī. The carefully labelled reliefs which tell the story of the visits paid to Buddha by the kings Prasenajit and Ajātasatru deserve attention for many reasons.

In the delineation of some of the animals, especially elephants and monkeys, a high standard of artistic excellence has been attained, and the scenes in which the capture of an elephant by a troop of impish monkeys is portrayed display much humour as well as executive skill. The series of reliefs on the coping (Cunningham, plates xl–xlviii) manifests the Alexandrian influence with special distinctness, the long gar-

land being very cleverly used to divide the subject into compartments by its sinuosities. This garland was long a favourite motive in Hellenistic and Graeco-Roman sculpture, continuing in use up to Byzantine times, and even later. In the second period of Indian art it was largely employed by the artists of Gandhāra.

The upper moulding of the coping is a variation on the 'knop and flower' pattern, the knop or cone being replaced by miniature battlements or crenelations of Persian form.

Sānchī. When the unique group of ruins near Sānchī in the State of Bhopāl became known to Europeans, in A.D. 1818, seventeen *stūpas* were standing undisturbed; but in subsequent years amateur excavations, conducted without adequate care and knowledge, wrought much damage, and destroyed some of the buildings. Since 1880 the monuments have received expert attention, and effective measures have been taken for survey, conservation, and publication. Mr. Cousens, Archaeological Surveyor of the Bombay Circle, took 236 large-scale photographs in the years 1900 and 1901, which will facilitate detailed study of the sculptures and form a valuable supplement to the works of Cunningham, Maisey, Fergusson, and Cole.

The buildings are of different ages. The great *stūpa* or tope is very ancient, and may be a monument of early Buddhism older than the time of Asoka. The stone railing of perfectly plain design which surrounds this building may also possibly be anterior to the age of Asoka. Certain isolated monolithic pillars and other accessories certainly date from the reign of the great Maurya emperor (272–231 B.C.). The highly decorated gateways, technically called *toranas*, which give access to the sacred precinct, are of later date, and were probably completed about 140 B.C., in the time of the Śunga dynasty, which succeeded the Maurya. The minor buildings are of different dates, but all are early.

Each of the four great gateways, which are the glory of the principal *stūpa*, is composed of two massive pillars and three successive architraves or beams, separated by small balusters. The entire surface of every member on all sides is covered with sculpture in relief, and a large volume might be devoted to the detailed description of each gateway. The subjects, which are generally similar to those at Bharhut, include *Jātakas* and all sorts of incidents connected with Buddhist legend. The criticism on the aesthetic merits of the Bharhut reliefs is on the whole applicable to those of Sānchī, but the earlier work is the better of the two. A relief on the eastern

gateway, representing boys riding on horned lions, one of whom holds in his hand a vine branch and bunch of grapes, is clearly Hellenistic in conception. The oxen with human faces, long pointed beards, and finely twisted manes, which appear in another relief on the same gateway[1], recall, as Herr Grünwedel points out, the ancient Greek river-gods even more than the Assyrian cherubs. Assyrian elements undoubtedly exist in early Indian art; but they came through Persia, and the style of the early period in India may be correctly described as compounded of Persian, Hellenistic, and Indian elements.

Monolithic pillars of Asoka.

The numerous detached monolithic pillars erected by Asoka, of which nine are inscribed, bear testimony, like the stone coffer at Piprahwa, to the perfection attained by the early stone-cutters of India in the exercise of their craft[2]. The shaft of the Lauriyā-Nandangarh pillar in Tirhut is a polished block of fine sandstone nearly 33 feet in length. The height of the capital, including the abacus and crowning lion, is 6¾ feet, so that the whole monument stands almost 40 feet high; and some of the other monoliths are even more massive. No small skill was required to manipulate such enormous masses. The principal member of the Asoka capital is reeded and bell-shaped in the Persepolitan style. The edge of the abacus is in some cases adorned by a row of wild geese pecking their food, a decoration probably suggested by the frequent introduction of the goose in Alexandrian sculpture. The abacus of the pillar at Allahābād is decorated with a graceful scroll of alternate lotus and honeysuckle, resting on a beaded astragalus of Hellenistic style. A fine capital found at Pātaliputra exhibits the acanthus leaf ornament delicately carved in low relief. In general terms the Asoka pillars may be described as imitations of the Persian columns of the Achaemenian period with Hellenistic ornament.

Sculpture in the round.

The few examples of sculpture in the round which are assignable to the age of Asoka cannot be said to attain a high standard of excellence. The lions which still crown some of the monolithic pillars are stiff and conventional, although the paws are rendered with some regard to nature. Indian sculptors have always succeeded better with the elephant than with any other animal; and the figure of the fore part of an elephant

[1] Casts of the eastern gateway have been supplied to the Indian Museum at South Kensington, and several other museums, Edinburgh, Dublin, Berlin, &c.

[2] A tenth inscribed pillar was discovered at Sārnāth near Benares in 1905 (*Ep. Ind.*, viii, 166). See Sohrmann's treatise, *Die Altindische Säule* (Dresden, 1906).

carved in the rock, which watches over the inscription at Dhauli in Orissa, is imposing and dignified, if it cannot be called beautiful.

A colossal statue of a woman, 6 ft. 7 inches in height, found at Besnagar in the State of Gwalior, is of interest as being the only early detached statue of a female yet found in India, and probably dates from the time of Asoka. This work is free from the monstrous exaggeration of the bust and hips which deforms the later attempts of Indian sculptors to represent the female figure, and is a creditable performance, although it cannot claim to rank as high art. The arrangement of the drapery is rigid and formal. Both arms have unfortunately been lost.

Mathurā. The mounds of the ancient and sacred city of Mathurā (Muttra) on the Jumna have yielded a rich treasure of sculptures of various dates. Most of them belong to the time of the great Kushān or Indo-Scythian kings of the second century A.D., but many interesting specimens are of earlier date. The oldest may probably be referred to the latter part of the second century B.C., when foreign princes with the Persian title of Satrap governed Mathurā. A very curious sculpture of Hercules strangling the Nemean lion is of uncertain age. The superior execution of the figure of Hercules as compared with most Indian statuary suggests an early date, whereas the feebleness with which the lion is treated points to a period of decadence[1]. The four groups of bacchanalian figures found at Mathurā have given rise to much discussion. They are undoubtedly among the best of Indian sculptures, and may belong to the Early Period, but the probability perhaps is that both they and the Hercules should be referred to the second century A.D. during the Kushān Period[2].

Jain *stūpas*. Most writers on Indian antiquities assume that the *stūpa* and its concomitant railing are Buddhist only; and, in consequence of this assumption, stone railings such as those above mentioned are commonly spoken of as 'Buddhist railings.' But, as a matter of fact, the art and architecture of early India were not sectarian. All religions, Buddhist, Jain, and Brāhmanical, used the art of their age and country, and all alike drew on a common storehouse of symbolic and conventional devices. The Jains, especially, erected *stūpas* surrounded by stone railings which are indistinguishable from those of the Buddhists, and honoured the bones of their saints in exactly

[1] Photographed in Cunningham's *Reports*, vol. xvii, pl. xxx.

[2] Photographed in *J. A. S. B.*, pt. i (1875), pl. xii, xiii. Both published in Griggs's *Monuments, &c., of India*.

the same way as did their rivals. The prejudice that all *stūpas* and stone railings must necessarily be Buddhist has probably prevented the recognition of Jain structures as such, and up to the present only two undoubted Jain *stūpas* have been recorded. The foundations of the larger example, nearly 70 ft. in diameter, were excavated by Dr. Führer on the Kankāli mound at Mathurā, and numerous Jain sculptures belonging to it, dating from both the Satrap and the Kushān periods, were exhumed, and are now in the Lucknow Museum. The reliefs give several pictures of Jain *stūpas* surrounded by all the accessories commonly associated exclusively with Buddhist monuments. A miniature votive *stūpa*, with an inscription in honour of a Jain saint, dating probably from the third or fourth century A.D., was also found at Mathurā. The smaller structural building was excavated at Rāmnagar (Ahīchhatra) in Bareilly District.

Decoration of *stūpas*.

In addition to the stone railings and decorated gateways, *stūpas*, whether Jain or Buddhist, were adorned with numerous other accessories, including stone umbrellas, elaborately carved pillars and pilasters, and abundant statuary, usually in the form of reliefs, but occasionally detached. No existing *stūpa* is in a sufficiently perfect condition to display these accessories in position, but the reliefs supply numerous pictures of *stūpas* in all their glory. The permanent architectural and sculptured decoration was supplemented by huge tinsel garlands suspended from pegs fastened in the masonry, and by lamps inserted in little niches and distributed over the surface of the monument. The Chinese pilgrim, Hiuen Tsiang, mentions two *stūpas* ascribed by tradition to Asoka which were each 300 ft. high. One of these was faced with stone, curiously carved, the other was of brick. Many others are described which stood from 100 to 200 ft. in height. Monuments of this magnitude, when decorated with the lavish ornament dear to the heart of the Indian architect, must have presented a spectacle of extraordinary magnificence.

Sculpture in the early caves.

The artificial caves of India devoted to religious purposes exceed a thousand in number, and range in date over more than a thousand years. The most ancient are the polished chambers hewn out of the gneiss of the Barābar hill near Gayā, by order of Asoka, in 257 B.C., as hermitages for certain Hindu ascetics. These chambers, destitute of sculpture and almost devoid of ornament, do not concern the history of Indian art; but some of the numerous caves in the hills of the Western Ghāts are nearly as ancient, and are adorned with a certain amount of sculpture.

Among the oldest of the western caves are those at Bhājā and Pitalkhorā, which may be as early as 200 B. C. The sculptures are far inferior in interest to those of the same period in Northern India, but some winged sphinx-like figures may be mentioned as being curious and related to the Mahābodhi reliefs. Four of the Ajantā caves, Nos. IX, X, XII, and XIII, are also early. But the chief interest of the Ajantā caves centres in the celebrated paintings, and it will be convenient to treat the ancient Indian schools of painting together. The sculptures in the Udayagiri caves of Orissa date from the second century B. C.

The Second or Kushān Period. The Second (and best) Period of Indian plastic art may be regarded as extending over a space of about three centuries, from A. D. 50 to 350. With reference to the principal dynasty of the time in Northern India, it may also be designated as the Kushān Period.

History. According to the most probable system of chronology[1], the Kābul Valley was conquered by the Kushān or Indo-Scythian king, Kadphises I, about the middle of the first century A. D., and all Northern India was annexed by his successor, Kadphises II, forty or fifty years later. The subsequent kings of the dynasty, Kanishka, Huvishka, and Vāsudeva, continued to rule India north of the Narbadā river up to the date of the rise of the Sassanian dynasty of Persia in A. D. 226. The relaxation of the Kushān hold on India may have been due to unrecorded conflicts with the new Persian dynasty. After the date named the Kushān power in India was restricted to the Punjab, where it seems to have lasted until the Hun invasions in the fifth century. Meantime, the Sakas, another race of invaders from Central Asia, had occupied the peninsula of Kāthiāwār and the neighbouring province of Mālwā about the end of the first century A. D. The table-land of the Deccan was governed by a native dynasty, the Āndhras, who disappear about the same date as the Kushān kings of India below the Punjab.

Influence of Roman taste. During the three centuries referred to, and especially up to the date of the destruction of Palmyra in A. D. 272, the Indian kingdoms were in active commercial, and occasional diplomatic, relations with the Roman empire, which, in the time of Hadrian (A. D. 117–38), perhaps touched the boundary of the Kushān dominion. Hellenistic art at this period assumed a cosmo-

[1] See the writer's article, 'The Kushān Period of Indian History,' *J. R. A. S.*, Jan. 1903. Dr. Fleet has another theory, the proofs of which have not yet been published.

politan aspect under the uniform pressure of the Roman rule and taste. We find consequently that Indian Buddhist sculptures in the Punjab are often hardly distinguishable from contemporary pagan works at Palmyra and Christian works in the catacombs. The Corinthian capital, which in various florid forms was so fashionable in the Roman empire, was freely imitated as a decoration by the masons and the sculptors of the Punjab, who did not hesitate to mix up Graeco-Roman with Persian forms. The artists simply followed the taste of the day, whether they were working on commissions given by Buddhists, Pagans, or Christians. The way in which Indian sculptors of the Kushān period adopted Graeco-Roman fashions and mixed them up with the familiar Persian forms may be compared with the modern practice of mingling European and Asiatic designs without much regard to congruity. India has always been eclectic in art matters, and most of the designs now known as Indian are really of foreign origin.

Two principal schools of sculpture.

The principal examples of the sculpture of the Kushān period fall into two local schools; those of Gandhāra and Amarāvati. The Yūsufzai country north of Peshāwar, with some neighbouring territories, constituted the ancient province of Gandhāra. The Indo-Graeco-Roman sculptures, often designated as Graeco-Buddhist, are found chiefly in that province, and are best designated by its name. The Amarāvati school is practically confined to a single locality, on the Kistna river, south of the Vindhya mountains. Some interesting sculptures of the period also occur at Mathurā on the Jumna, and Dr. Stein has recently discovered the traces of a branch of the Gandhāra school in distant Khotan in Chinese Turkistān.

Abundance of Gandhāra sculptures.

No Indian sculptures have excited interest in Europe at all comparable with that aroused by the extremely numerous works of the Gandhāra school, found at Buddhist sites in the Yūsufzai country north of Peshāwar, and in the neighbouring valleys of the Kābul and Swāt rivers. The multitude of these works is astonishing. Hundreds are deposited in the galleries at Calcutta, Lahore, Woking, Lucknow, the British Museum, and South Kensington. Many more are to be found in minor collections, and thousands must still remain on the numerous sites of Buddhist establishments. The Calcutta collection, as it stood twenty years ago, was catalogued by Dr. Anderson; but of the other collections named, with the exception of Woking, no catalogue is available. The literature of the subject is considerable, and much progress has been made in determining

the date and artistic affinities of the school, but many problems concerning it still await solution.

General description of Gandhāra sculptures.

The Gandhāra sculptures consist for the most part of works in high relief executed in clay slate, for the decoration of Buddhist monasteries and their appurtenant buildings. Statues in the round also occur, and plaster heads are numerous. All the better specimens, which range in date between A. D. 100 and 300, are obviously 'classical' in style, and very closely related to the art of the Roman empire in the Antonine period. The drapery is treated in the Greek fashion, and with considerable ease and grace in the best examples. Figures in the pose of Atlas are commonly used as supporters, the muscles being treated in a way that recalls the teaching of the masterly Pergamene school. The composition of groups is arranged on the lines usual in Graeco-Roman reliefs, and the conventional representation of the dying Buddha is clearly imitated from contemporary Graeco-Roman sarcophagi. Many of the figures of the Buddhist mythology are certainly adaptations of Greek gods, among whom Apollo, Zeus, Gē, Nikē, and others may be recognized. The expressions of the different actors in the scenes represented are carefully discriminated, and often finely rendered, but the drawing of the body frequently fails in proportion. Taken as a whole, the work of the school is probably equal in merit to much of the contemporary sculpture in the provinces of the Roman empire, and infinitely superior to any truly Indian production.

The sculptures illustrate the Newer Buddhism.

The sculptures are illustrations of the creed of the Newer Buddhism, technically called Mahāyāna, which practically deified Buddha and surrounded him with a numerous hierarchy of saints and angels. The primitive Indian Buddhists clearly realized the fact that their teacher was dead and gone, only his word abiding with them. But this dry doctrine did not suit the foreign nations to whom Buddhism was preached by Asoka's missionaries and their successors, and the times in which the various forms of Christianity and Gnosticism took shape witnessed a profound transformation of Buddhism. The new Buddhists entertained ideas which may be called Messianic, and transferred their homage from a dead Teacher to a living Saviour. Buddha was deified in practice if not in theory, and his images were multiplied exceedingly. Primitive Buddhism had no images of the Teacher. When the Sānchī and Bharhut artists wish to suggest his presence in a scene, they do so by a symbol, usually the imprint of his footsteps. But in the Gandhāra sculptures his image is everywhere, and

many attempts were made before the artists succeeded in evolving an approved conventional likeness. The story of these efforts, and of the diffusion of the type finally evolved over the Buddhist world, has been ably worked out by Herr Grünwedel and M. Foucher. The introduction of the image of Buddha supplied a centre for each group, and thus enabled the artists of Gandhāra to produce well-balanced, symmetrical compositions, in which Buddha plays the same part as Christ in Christian and the Imperator in Pagan works. Jain sculpture of this period is arranged on the same principle, a Jain saint taking the place of Buddha.

Chronology of the Gandhāra school.

The art of the Gandhāra school undoubtedly attained its highest development during the reign of the powerful Kushān monarchs Kanishka and Huvishka, from about A.D. 120 to 185, while Hadrian, Antoninus Pius, Marcus Aurelius, and Commodus occupied in succession the imperial throne of Rome. The very best specimens probably all belong to the second century, but good work was done in the third century also, and very fair work in the fourth. How long the style lingered in the remote valleys of Swāt and Buner is not known.

In India proper few traces of the Gandhāra school are to be found except at Mathurā, where images dating from the time of Kanishka and Huvishka, and clad in the characteristic Greek drapery, have been found. Mr. Growse has figured a specimen which is remarkable for the skill with which the outline of the body is shown through the drapery. The Bacchanalian and Hercules groups, of uncertain date, found near Mathurā have been already mentioned. They differ in style from the Gandhāra work, and may possibly represent a distinct early Indo-Hellenic school.

Amarāvati.

The establishment belonging to the Mahāyāna sect, or Newer Buddhism, at Amarāvati in the Kistna District of Madras, was famous in olden days, but was already deserted in the seventh century A.D. when the Chinese pilgrim Hiuen Tsiang travelled through India. The ancient *stūpa* existed up to the beginning of the nineteenth century, when it was destroyed by a local landholder for the sake of the materials. The precinct around it was enclosed by two great railings or screens, an inner and an outer one, of white marble, profusely covered with elaborate sculptures in low relief.

The outer and principal railing, the most elaborate and artistic monument of the kind in India, was formed of upright slabs standing about 10 feet in height above the level of the inner paved path, and connected by three cross-bars running

between each pair of uprights, with ends lenticular in section and let into mortices cut in the edges of the upright slabs or pillars. These supported a coping or frieze about 2 ft. 9 inches high; and a brick support about a foot high ran along the line of their bases, so that the whole monument stood about 14 ft. in height. The outside of the plinth was ornamented by a frieze of animals and boys, generally in comic attitudes. On the cross-bars were full discs, all different and all carved with the utmost care. The outside of the coping was decorated with the favourite device of a long flower-roll carried by men, on or over which sundry symbols were inserted. The inside of the rail was even more elaborately carved, the coping or frieze being one continuous bas-relief; while the central discs of both the rails and the pillars were filled with sculptures of great elaboration and beauty of detail, representing scenes of sacred legend or of everyday life. The inner rail was similar in character but of smaller dimensions. It is calculated that the separate figures carved on the outer rail alone amount to about 12,000. No general description can convey any idea of the richness of the ornament; and readers who desire to appreciate the merits of these splendid works must consult the illustrated publications of Messrs. Fergusson and Burgess, or better still, examine the marbles themselves on the grand staircase of the British Museum. Very many of the priceless sculptures were ruthlessly consigned to the lime-kiln by local barbarians. Most of those rescued have found a resting-place, after many adventures, in the national collection or in the Madras Museum.

The characteristic features of the decoration alluded to above —the discs, wavy roll, and boys and animals in comic attitudes— help to determine the age and affinities of the monument. The general style may be defined as an Indianized adaptation of an Antonine development of Alexandrian art. This proposition, which might be deduced from consideration of the style alone, is confirmed by a few inscriptions and other items of external evidence. The work, of course, took many years to execute, and no single date can express the chronology with accuracy. It is, however, safe to say that the outer railing should be referred to the second half of the second century A.D., and must be contemporary with Huvishka, the Kushān king of Northern India, and with the best examples of the Gandhār sculptures. At that time Amarāvati was included in the dominions of the Āndhra kings of the Deccan. The inner rail may be slightly later in date.

Although the resemblances between the works of the Gandhāra school and the Amarāvati marbles are to some extent obscured by differences of material and treatment, the close relationship of the two schools cannot be denied. Both are essentially Indianized adaptations of Graeco-Roman art; but the sculptors of Amarāvati seem to have drawn their inspirations chiefly from Alexandrian models, whereas the artists of Gandhāra were more indebted to the Hellenistic schools of Asia. The image of Buddha is as frequently seen at Amarāvati as in Gandhāra, and is clad in drapery arranged in Greek style. A few sculptures, more or less closely resembling the Amarāvati marbles, have been found at other sites in the neighbourhood.

The Ajantā paintings. Before proceeding farther with the history of sculpture, it will be convenient to consider the subject of painting. Although there is reason to believe that schools of pictorial art may have existed at various places in ancient India, the actual remains of early paintings are confined to two western localities, the caves near Ajantā in the Aurangābād District of the Nizām's Dominions, and those at Bāgh in the south of Mālwā. The remnants of pictures at the latter place have not been copied or minutely described, and our knowledge of ancient Indian painting is practically limited to what is left of the Ajantā paintings. Since these works first became known to Europeans in 1819 they have suffered many things, and most of the copies made by Major Gill in the course of thirty years' labour perished by fire at the Crystal Palace in 1866. The diminished residue of the originals has since been copied again by Mr. John Griffiths, whose work, half destroyed by a fire at South Kensington, has been published (so far as it escaped destruction) by command of the Secretary of State for India. But no adequate monograph on the paintings, dealing with them from all points of view, technical, aesthetic, and historical, has yet been written, and many problems concerning them await solution. Traces of painting, some on the ceilings, some on the walls, and some on pillars, survive in thirteen caves, but the important remains are confined to five or six.

Technical execution. Technically, as Mr. Griffiths observes (*I. A.*, ii, 153),

'They are not frescoes in the true acceptation of the term, nor do they appear to correspond to the Italian *fresco secco*, where the entire surface of the wall was first prepared for painting on, and then thoroughly saturated with lime-water before the painting was commenced—as the groundwork upon which the paintings at Ajantā were executed would, I think, hardly admit of this treatment.

'The groundwork, which appears to be composed of cow-dung with an immixture of pulverized trap, was laid on the roughish surface of the rock to a thickness varying from a quarter to half an inch. To increase the binding properties of this ground rice-husks were introduced in some instances, especially in the ceilings. Over this ground was laid the *intonaco* of thin, smooth plaster, about the thickness of an egg-shell, upon which the painting was executed. This thin coating of plaster overlaid everything—the mouldings, the columns, the ornamental carving, and the sculptures—and enough remains to show that the whole has been closed.'

Age of the paintings.

The paintings unquestionably extend over a period of several centuries. The earliest, which comprise a fragment on the inside front wall of Cave IX and works on the side walls of Cave X, are referred to the second century A.D., when the most powerful kings of the Āndhra Dynasty ruled the Deccan, and Kanishka and Huvishka were lords of the North. These pictures are therefore approximately contemporary with the marbles of the great railing at Amarāvati and the best sculptures of Gandhāra. The second period of the paintings is represented by pictures of Buddha, with drapery and nimbus after the style of the Gandhāra school on the pillars of Cave X, which may be dated between A.D. 350 and 550. The third and most important series, of which large remains exist in Caves I and XVII, was executed in the sixth and seventh centuries, and may be dated between A.D. 550 and 650. Contrary to what might be expected, these later paintings are the best and most interesting. They present an astonishing contrast when compared with the inartistic figure sculpture or the barbarous coins of the period.

Subjects of the paintings.

The pictures were painted primarily for the edification of pious Buddhists, like the modern decorations of the Ceylon monasteries, not as mere adornments, and the subjects are confined (with perhaps one exception) to those drawn from Buddhist mythology or legend. Among them representations of twelve *Jātakas*, or stories of Buddha's previous births, have been identified. Others deal with the well-known traditional incidents of his last life on earth, among which the picture of the Temptation in Cave XXVI may be specially mentioned. A very interesting painting in Cave XVII, crowded with figures, is believed to represent the landing and coronation of king Vijaya in Ceylon, as recorded by the chroniclers of the island. Lt.-Col. Waddell, I.M.S., has proved that the so-called 'zodiac' in Cave XVII is really a representation of the Buddhist doc-

trine of the 'wheel of life,' and that it can be interpreted by the help of modern Tibetan paintings[1]. Special interest attaches to the picture in Cave I, depicting the reception of a Persian embassy by an Indian king. Good reasons exist for believing that the embassy referred to was dispatched by Khusrū II, king of Persia, to Pulakesin II, king of the Deccan, in or about A.D. 625. The connexion of this composition with Buddhism is not obvious.

The aesthetic merits of the paintings have been appraised by the late Mr. Fergusson and Mr. Griffiths, both of whom compare the later pictures at Ajantā with the work of Italian artists in the fourteenth century. In Mr. Fergusson's judgement they are better than anything in Europe before Orcagna or Fiesole. Mr. Griffiths considers the picture of the dying princess (size 4 ft. 11 inches by 4 ft. 3 inches) in Cave XVI to be the best piece of painting now remaining at Ajantā, and criticizes it in the following terms:— Aesthetic merits.

> 'For pathos of sentiment and the unmistakable way of telling its story, this picture, I consider, cannot be surpassed in the history of art. The Florentine could have put better drawing, and the Venetian better colour, but neither could have thrown greater expression into it. The dying woman, with drooping head, half-closed eyes, and languid limbs, reclines on a bed the like of which may be found in any native house of the present day. She is tenderly supported by a female attendant, while another with eager gaze is looking into her face and holding the sick woman's arm as if in the act of feeling her pulse. The expression on her face is one of deep anxiety, as she seems to realize how soon life will be extinct in one she loves. Another female behind is in attendance with a *panka* (fan), whilst two men on the left are looking on with the expression of profound grief depicted in their faces. Below are seated on the floor other relations, who appear to have given up all hope, and to have begun their days of mourning—for one woman has buried her face in her hands and apparently is weeping bitterly.' (*I. A.* iii, 27.)

This is high praise, but not without justification. The Ajantā paintings undoubtedly deserve attention on their merits as works of art, and not merely as curiosities or pictures of manners.

The problem of the origin and artistic affinities of the Ajantā paintings is extremely obscure, and at present is not susceptible of a definite solution. They stand practically alone in India, and nothing contemporary seems to exist anywhere Origin and artistic affinities of the paintings.

[1] *J. A. S. B.*, pt. i, vol. lxi (1892), p. 133.

with which they can be compared, except perhaps some of the frescoes discovered by Dr. Stein in Khotan. Their foreign origin is apparent, but nobody knows where the artists came from, or what their models were. The most ancient paintings in Cave X (Burgess, *Notes*, pl. vii–x) exhibit admirably drawn groups of men, women, and elephants. Inasmuch as the caves are situated near the western coast, and these early paintings are approximately contemporary with the pictorial bas-reliefs of the Amarāvati marbles, in which Alexandrian influence may be traced, the probability seems to be that the inspiration of the Ajantā paintings was drawn from the same source. The Buddhas on the pillars of Cave X, executed in the Gandhāra style during the fourth and fifth centuries, are merely illustrations of the general proposition demonstrated by Herr Grünwedel, that the standard pattern for images of Buddha was evolved in Gandhāra and copied subsequently, even to the present day, in all Buddhist countries. The most attractive pictures, which seem to belong to the century between A. D. 550 and 650, exhibit powers of composition and bold freehand drawing quite at variance with the character of the contemporary Indian art. The very latest Indian coins with the slightest pretensions to artistic merit are earlier than A. D. 400. During the fifth and sixth centuries, the period of the Hun invasions and consequent anarchy, the coinage of India presents an aspect of chaotic barbarism, and the figure sculpture of the age, as distinguished from decorative patterns, is contemptible. The best literature of the time is the tawdry and insincere rhetoric of Bāna, overladen, like the pillars of the temples, with redundant and incongruous ornament. With the exceptions of the inherited skill of the stonemasons' guilds in working out intricate patterns with astounding exuberance, and of some successes in architectural design, art was then dead in India. The Ajantā paintings could not have originated in such an environment. Those of late date seem to have been produced by foreign artists, working under the patronage of the powerful Chālukya kings of the Deccan, especially Pulakesin II (611–42), the rival and successful opponent of Harsha, ruler of the North. But to determine the place from which those foreign artists came, a little before and after A. D. 600, is not easy. The conjecture may be hazarded that the later Ajantā paintings are an Indianized development of the Sassanian art of Persia, which produced the Takht-i-Bostān reliefs described by Sir R. K. Porter, and was itself derived from the schools of Greece. The Sassanian monarchy was destroyed by the Arabs in A. D. 641; but

even after the Muhammadan conquest the art of painting continued to be patronized by the Persian kings of the Shiah sect, and in the sixteenth century, when Akbar resolved to decorate his palaces with paintings on plaster, he was obliged to import artists from Persia. It is, therefore, not unreasonable to suppose that Akbar was anticipated by the Chālukya monarch, and that the artists who painted the later and best Ajantā frescoes came from Persia.

Decline of the art of sculpture.

After A.D. 300 Indian sculpture properly so called hardly deserves to be reckoned as art. The figures both of men and animals become stiff and formal, perception of the facts of nature almost disappears, and the idea of power is clumsily expressed by the multiplication of members. The many-headed, many-armed gods and goddesses whose images crowd the walls and roofs of mediaeval temples have no pretensions to beauty, and are frequently hideous and grotesque. The dignity of the architectural design is, on the contrary, often imposing beyond dispute; and the sculpture is so varied, laborious, and multitudinous that the spectator, however much he may criticize its obvious deficiencies, is impressed with a feeling of wonder, and even of admiration. Throughout the ages the Hindu masons have retained the faculty of producing in extraordinary variety decorative patterns of infinite complexity, executed with consummate mechanical skill. The great mediaeval buildings, indeed, seem to have been designed mainly for the exhibition of unrestrained ornament, lavished on every available surface in such inordinate quantity that it often wearies the eye and partially defeats its purpose. Many of the wreath-forms and other motives of the early semi-classical art continue to be used, although in highly conventionalized forms. Every mediaeval temple of importance throughout India might be cited as illustrating these remarks, but the limitations of space preclude us from noticing individual works, except a few which may be noted as marking stages in the decadence of Indian art.

Religion and sculpture.

The artistic remains of ancient India up to the beginning of the fourth century are mainly Buddhist. Under the Gupta dynasty (A.D. 320–480), a great revival of Brāhmanical Hinduism took place and Buddhist worship slowly decayed. But Buddhism was not as a rule violently extirpated; it continued to flourish in Bihār, the ancient Magadha, under the rule of the sympathetic Pāl kings, until the Muhammadan conquest at the end of the twelfth century, and traces of its survival are found in many other parts of the country up

to as late a time. The mercantile and trading classes, who formed the great stronghold of Buddhism, seem to have turned to the allied Jain system, especially in Central and Southern India. Bundelkhand is full of Jain images of the eleventh and twelfth centuries, whereas Buddhist remains of that period are rare. The colossal monolithic nude Jain statues of the South are among the wonders of the world. That at Sravana Belgola in Mysore, which stands clear on the top of a hill, is 57 ft. in height, cut from a single block of gneiss. There are similar colossi at Yenūr and Kārkala in South Kanara. The last named was erected in A.D. 1432. As works of art their merits are not great[1]. The colossal reliefs carved in the rock face at Gwalior are also Jain, and belong to the same period, having been executed between A.D. 1440–73. The later Buddhists used images as freely as the Jains and Brāhmanical Hindus; and the adherents of all three religions drew on a common stock of symbolism and convention in the same way as in early times. The mediaeval Buddhist statuary of Bihār, consequently, is almost identical with that of Hindu temples, and the two classes of objects are frequently confounded, even by skilled archaeologists. The Jain statues are ordinarily, although not always, distinguishable from the Buddhist by their nudity, but the accessories of both do not differ widely.

Art of the Gupta period (A.D. 320–480).

The sculpture on the flat-roofed temples of the Gupta period in Northern India is of the usual kind—conventional and misshapen figures accompanied by pretty and well-executed decorative patterns. Emblematic statues of the Jumna and Ganges rivers, the former standing on a tortoise and the latter on a crocodile, characterize the style. The Gupta emperors imitated Asoka in the matter of monolithic pillars, which again became fashionable in the fourth and fifth centuries. Samudra Gupta (A.D. 326–75) was content to make use of an old Asoka pillar at Allahābād to record his deeds; but in the reigns of his successors several notable new monoliths were erected—for example, at Eran in the Central Provinces and Kahaon in Gorakhpur. The famous Iron Pillar, now standing in the courtyard of the Kutb mosque near Delhi, probably was originally erected on a hill at Mathurā. The inscription, recorded about A.D. 415, commemorates the military achievements of Chandra Gupta II, emperor of Northern India (A.D. 375–413). The pillar is a welded mass of pure malleable iron, 23 ft. 8 inches in length, and is a triumph of the black-

[1] These colossi are illustrated in *I. A.*, vols. ii, iii, and v.

smith's art which few modern foundries could emulate. The capital retains the outline of the old Persian form[1].

Two of the most remarkable examples of early mediaeval sculpture are to be seen on rocks near the celebrated Raths, or rock-cut shrines, near Māmallapuram (Mahābalipur, or 'Seven Pagodas'), on the coast thirty-five miles south of Madras. One of these works, a tableau representing the goddess Durgā in conflict with the buffalo demon, was considered by Mr. Babington to be the most animated piece of Hindu sculpture which he had seen, and is praised by Fergusson for its spirited character. The other, a huge bas-relief, executed on two masses of rock, extends to a length of 90 feet, with an average height of 30 feet. The principal figure is a four-armed god, apparently Siva, but the other figures are very numerous, and include 'a whole menagerie of animals.' The colossal images of a Nāga Rājā and his queen—imposing and dignified, if not very artistic works—lie close by. All these sculptures are believed to date from the sixth or seventh century A.D. Māmallapuram sculptures.

In the time of the powerful kings of the later Chālukya dynasty of the Deccan (A.D. 973–1189), numerous temples in a peculiar style of architecture, and covered with the most elaborate ornament, were erected. The finest edifice in this style is the incomplete temple erected early in the twelfth century by the Hoysala king Vishnu at Halebīd in Mysore. It is specially remarkable for the rich friezes of elephants, lions, &c., crowded with thousands of figures. Chālukya sculpture.

The Chālukyan temples of Bellary District, in Madras, have been described by Mr. Alexander Rea in a special monograph. The carving, so deeply undercut that the ornament is sometimes attached to the masonry by the slenderest of stalks, is characterized by 'marvellous intricacy and artistic finish in even the minutest details.' The foliage, purely conventional, is arranged as a massive incrustation resting in high relief against the background. The work, which dates apparently from the twelfth century, is remarkable for its exuberance of varied forms, boldly designed and finely executed; but the figure sculpture is feeble in the extreme.

The two grand towers at Chitor in Rājputāna deserve a passing notice. The Jain tower, 80 feet high, of uncertain date, is covered with sculpture; and the somewhat The towers of Chitor.

[1] Many books exaggerate the dimensions of this pillar, which is popularly supposed to extend far below ground. In reality the underground portion is only 1 ft. 8 inches in length. The base of the monument is a bulb resting on an iron gridiron, soldered into the pavement.

similar structure built between A.D. 1442 and 1449, to preserve the name and fame of the local chieftain, is equally ornate. This building is constructed in nine storeys, more than 120 feet in height. 'Statues and ornaments decorate it inside and out, and every Hindu deity, with the name inscribed below, is there represented.' These sculptures, which have not been published, thus constitute an illustrated dictionary of Hindu mythology[1]. No adequate account of the magnificent buildings at Chitor has yet been prepared.

Bhuvanesvar, Khajurāho, and Mount Abu.

The largest group of mediaeval temples in Northern India probably is that at Bhuvanesvar (Bhubaneswar) in Orissa, said to comprise five or six hundred separate edifices, ranging in date from the seventh to the twelfth century. The architecture and sculptures form the subject of a large but unsatisfactory work by the late Rājendrāla Mitra. Another important group of temples, erected under the patronage of the Chandel dynasty at Khajurāho (Khajrāho) in Bundelkhand between A.D. 900 and 1200, presents the usual indiscriminate profusion of bad sculpture, some figures of which are grossly obscene. The architectural design of many of the temples, both at Bhuvanesvar and Khajurāho, is very fine, and the ornamentation, as distinguished from the sculpture properly so called, exhibits the usual variety and delicacy. The cusped ceilings are particularly beautiful. The marble temples dedicated to Jain worship at Mount Abu in Rājputāna, of which the two finest date from A.D. 1032 and 1231, carry to its highest perfection the Indian genius for the invention of graceful patterns and their application to the decoration of masonry. The ancient cities of Rājputāna abound in magnificent buildings which have never been surveyed or described in detail.

Temples of the South.

The temples of the extreme South are characterized by the vastness of the scale on which they are designed. The central shrine is the least important part of the composition, and is surrounded by successive enclosures, each approached by huge gateways, which increase in size towards the outer circumference. The extent of wall surface thus provided affords infinite space for the application of sculpture. But it is all of very little merit, although imposing by virtue of its enormous quantity. The great Siva temple at Madura, on which twenty lakhs of rupees have been recently expended in repairs, is the

[1] Führer, *Progress Report N.W.P. and Oudh Circle for* 1892–93, pp. 19, 20. See also Burgess, *Photographs of Architecture and Scenery in Gujarāt and Rājputāna* (Calcutta, 1874); Cousens, *Prog. Rep. A.S.W.I.*, 1904–5, pp. 37–45; and local information.

best preserved. The greater part of the buildings dates from the seventeenth century. 'The glory of the place,' as Fergusson observes, is the hall of a thousand columns, decorated with sculpture of marvellous elaboration. The walls of some of the buildings are adorned with mythological frescoes. Trichinopoly possesses two celebrated and magnificent temples. The colossal rampant horses, standing about 12 ft. high, placed on pedestals in front of the pillars of the Seshagiri Rao Mantapam, are very striking works. Although the artist shows the usual Indian disregard for correct representation of the muscles, the general design of both the horses and the attendant grooms is spirited, and superior to that of most Indian sculpture. The date of these compositions is uncertain[1]. Other famous temples exist at Tanjore and many places in the South.

Vijayanagar.

The ruins of the splendid city of Vijayanagar, now Hampi, in the Bellary District of Madras, the capital of the 'forgotten empire' destroyed at the battle of Tālikotā in A.D. 1565, which cover many square miles, are now being surveyed by the Archaeological department. The numerous palaces and temples are adorned with a profusion of sculpture and architectural ornament. The outer and inner walls of one temple are 'covered with spirited basso-rilievos representing hunting scenes and incidents in the Rāmāyana,' and 'in the centre of the Vitthala temple is the stone car of the god, supported by stone elephants, and about 30 ft. high' (*I. A.* ii, 177). The detailed survey of this great site may be expected to result in many interesting discoveries.

Hindu decoration on early Muhammadan buildings.

As the Muhammadan invaders gradually established themselves in India and extended their conquests from the Punjab to the east and south, they naturally introduced new forms of architecture adapted to the needs of their religious worship and the taste of foreigners from Central Asia. These new forms of architecture, described in another chapter of this volume, are modifications of the Arab style, especially as developed in Persia on the basis of the Sassanian style, now represented by the remains at Sarvistān and other places in the province of Fars. But the conquering armies of Islām did not carry with them a crowd of masons and artificers, and the new rulers of India were compelled to build their mosques and palaces by the aid of Hindu workmen. Hence all the earlier Muhammadan buildings, even as late as the reign of Akbar, show unmistak-

[1] Cole, *Preservation of Indian Monuments*, 'Temples at Trichinopoly,' plate 9.

able traces of Hindu influence, and many are almost as much Hindu as Muhammadan in style. The marks of Hindu workmanship are, indeed, so apparent that several writers long contended even for the Hindu origin of the famous Kutb Minār near Delhi. But Sir Alexander Cunningham has demonstrated that this noble tower 'is entirely a Muhammadan one both as to origin and design; although, no doubt, many, perhaps all, of the beautiful details of the richly decorated balconies may be Hindu.' It was undoubtedly built as the *māzinah*, or minaret, for the proclamation of the call to prayers at the great mosque close by, which was itself constructed from the spoils of twenty-seven Hindu and Jain temples. The Minār, erected by Altamsh (not by Kutb-ud-dīn Aibak), was probably completed about A.D. 1230, which is the date of an inscription on the adjoining mosque. Repairs were effected by Fīroz Shāh Tughlak in the fourteenth century. The pillars of the mosque were taken bodily out of the idol temples and roughly adapted to serve their new purpose. They naturally retain most of their old ornamentation, which contrasts strangely with the great Saracenic arches. The same procedure was adopted in many other places, and numerous mosques display an odd combination of Perso-Saracenic arches and cupolas with Hindu architrave construction and mediaeval ornament. The specially Indian ornaments of the earlier Muhammadan buildings need not detain us. They comprise geometrical patterns and floral devices in great variety, exactly the same as those found in innumerable temples at Khajurāho, Mount Abu, and in fact all over India.

Foreign modes of decoration. But Indian ornament was supplemented, and ultimately displaced, by foreign forms of decoration, the history of which is worth tracing in some detail. One of the most characteristic ornaments of Muhammadan buildings in India is mosaic or inlay in various forms. In the earliest examples, of which Alā-ud-dīn's gateway on the south side of the Kutb mosque, erected in the year A.D. 1310, is the most notable, the inlay is confined to broad bands of white marble set in the red sandstone, and has a very pretty effect. The exterior of the tomb of Tughlak Shāh at Delhi, built in 1321, is decorated in the same severe style, which is seen in a more developed form in the Kila Kohna mosque built at Delhi by Sher Shāh (A.D. 1541–2).

Mother-of-pearl inlay. Mother-of-pearl is combined with marble on the tomb of Ahmad Shāh's queen at Ahmadābād (A.D. 1430), and is also used on the wooden canopy of the tomb of the saint Salīm Chishti at Fatehpur Sīkri, applied as a tesselated incrustation of

delicate design (A.D. 1571). Akbar's great mosque at Fatehpur Sīkri, erected in the same year, in imitation of a mosque at Mecca, is freely decorated with white marble mosaics of Arabian and Persian geometric patterns, occasionally varied by the insertion of blue and green enamel. A fine mosaic pavement is to be seen at the Rayan Angan palace at Udaipur, of the same date. All these early mosaics of different kinds were immediately derived from Asiatic models. **Geometric marble inlay.**

But, during the reign of Jahāngīr, the European artists and craftsmen then in the service of the Great Mogul introduced the Florentine, or *pietra dura*, style of mosaic, which during the reign of Shāh Jahān (A.D. 1627–58) almost superseded the older styles. ***Pietra dura.***

The Florentine mosaic, a revival of the ancient *opus sectile*, first appears in the Fabbrica Ducale built by Ferdinand I, Grand Duke of Tuscany, in 1558. It is composed of thin sections of hard stones (*pietra dura*), such as jasper, carnelian, and agate, cut to the shapes required, and neatly bedded in the masonry with cement. This style of mosaic, when executed by capable workmen, can be applied in the most various patterns, and is of an extremely decorative character.

The earliest imitation in India of the Florentine work is to be seen in the bold floral mosaics on Akbar's mausoleum at Sikandra near Agra, executed about A.D. 1613. But the first closely accurate copy of Italian *pietra dura* mosaic is ten years later in date and occurs in the Gol Mahāl, a domed pavilion in the Jagmandir palace at Udaipur. Shāh Jahān, while still known as Prince Khurram and in rebellion against his father, resided as a fugitive in this very building a year or two after the execution of the mosaics, and thus probably acquired his strong liking for the Italian mode of decoration. All travellers who have visited Agra and Delhi are familiar with the exquisite *pietra dura* decorations of the Tāj, of the tomb of Itimād-ud-daula, and of the royal palaces erected during Shāh Jahān's reign. Practitioners of the art settled in Agra, where it flourished for a considerable time as long as it was supported by court patronage. But when the imperial court dwindled to a shadow, the arts which depended upon it dwindled also, and at the beginning of the nineteenth century the Agra craftsmen had almost forgotten their ancient skill in *pietra dura*. The exertions of Dr. Murray, Inspector-General of Hospitals about 1830, revived the art, and the now numerous cold-season visitors to Agra buy enough to keep a moderate number of workmen engaged in producing commonplace articles. High-

class work is necessarily so expensive that the demand for it is very small. The localization of this pretty handicraft in Agra is a good example of the benefits which the Indian arts have so often gained by intercourse with outside nations and the importation of foreign ideas and designs.

Tomb of Jahāngīr at Lahore.

The fine sepulchre of Jahāngīr near Lahore (A.D. 1627–8), which is much less familiar to tourists than the buildings at Agra and Delhi, is remarkable for its display of 'all the resources of inlaying in marble, stone, and pottery, lavished on the central tomb. There is no structure in India which presents so many classes of mosaic work as this' (Cole). These classes comprise black and white panels filled with outlines of flagons and other objects, executed in a style possessing dignity without excessive severity; zigzag bands of variegated marbles and coloured stones; mosaics in geometrical patterns; *pietra dura* work in the Florentine fashion; and mosaics in enamelled tiles.

Early examples of enamelled tiles.

The art of embellishing buildings by the application of enamelled tiles was derived, through Persia, from the old-world craftsmen of Assyria and Babylonia. It was introduced into India by the Muhammadan invaders during the twelfth century, and from that time was frequently employed with great effect. Good early examples of this form of decoration are to be seen at Multān on the tombs of Bahā-ul-hakk and Rukn-ud-dīn, dating from the thirteenth and fourteenth centuries. The colours employed are dark blue, azure, and white. Tiles of green, yellow, and blue colour were used extensively to adorn the palace of the Hindu Rāja, Mān Singh, at Gwalior, which was built at the beginning of the sixteenth century. The floral patterns executed in green, yellow, and blue tile mosaics on the walls of Jahāngīr's tomb (A.D. 1627–8) are extremely effective.

The Chīnī-kā-Rauza near Agra.

The most striking example in India of the use of encaustic tiles is the Chīnī-kā-Rauza near Agra, the tomb of a poet who died in A.D. 1639, which has been described and illustrated in a special study by the late Mr. E. W. Smith. The exterior of the tomb was covered from top to bottom with mosaic of tiling in a variety of colours, arranged so as to form an unbroken flat surface. This uniformity of surface led Mr. Carlleyle to believe that the glazed decoration was applied, not in the form of tiles, but either in one continuous sheet or in a few very large sheets. The more searching examination of the building by Mr. E. W. Smith has, however, proved that the glazed patterns are made up of thousands of small pieces of tiles carefully embedded like mosaic into the face of the plaster. The brickwork was first

overlaid with a coat of plaster 2 inches in depth, which in its turn was covered by a finer layer 1 inch thick, and upon this the tiles, ⅝ths of an inch thick, were bedded. The range of colours is much greater than that of the earlier examples, and includes chocolates, vermilions, and lakes, which were quite unknown in more ancient times. The art of making enamelled tiles is now nearly extinct, but is said to linger at Peshāwar and in Sind.

Glass mosaics.

A rather meretricious, though pretty, form of decoration is the inlay of pieces of looking-glass, which became fashionable in the seventeenth century, and was adopted in later times by the Sikhs. The finest glass mosaics are in the palaces at Udaipur and Amber. The mirror throne in the centre of the western wall of the Udaipur palace is very brilliant, and overlooks a court to the east, the walls of which are adorned with peacocks standing in niches and executed in glass mosaic. The mirror mosaics of Shāh Jahān's 'Shīsh Mahal' in the Agra Fort are well known.

Paintings of the early Mughal period.

Painting was first used extensively as an architectural decoration by Akbar, who imported artists from Tabrīz and Shīrāz in Persia; but, according to Major Cole, earlier examples are to be seen on the interior of the dome of Shāh Ālam's tomb at Ahmadābād (A.D. 1475); on the walls of Mān Singh's palace at Gwalior (about A.D. 1507); and on the ceilings of the Kila Kohna mosque at Delhi (A.D. 1540).

Akbar and his successors, Jahāngīr and Shah Jahān, freely invoked the aid of the painter's art, and had no hesitation in permitting the delineation of the human figure, notwithstanding the prohibition of the Korān. The paintings of the Mughal period are commonly called frescoes; but the published accounts do not give detailed information concerning the technique, and they may or may not be true frescoes in the strict sense. The most interesting specimens of the time of Akbar are to be seen, unfortunately much damaged, in the small chamber used by the emperor as his bedroom in the Fatehpur Sīkri palace, and have been admirably reproduced in Mr. E. W. Smith's book. One of the best-preserved fragments represents a sailing boat, carrying Muhammadan passengers of the upper classes, running before the wind on a river passing an Indian city. Although the perspective might be better, it is not bad, while the drawing of the figures is distinctly good, and the different expressions of the various actors in the scene are vividly rendered. The style of the figures closely resembles that of the best of the miniature paintings which are still produced at Agra, but probably it would be difficult now to find

an artist there capable of designing a group equal to that in this ancient work.

Paintings in Chinese style.

Another painting in the same room is unmistakably Chinese in style, and the subject is apparently Buddhist. It is not improbable that the foreigners in attendance at the Mughal court may have included Buddhist artists from China, but, even if none such were present, the court painters would have found no difficulty in copying an imported Chinese picture. Sir Thomas Roe, the ambassador of James I at Jahāngīr's court in 1615, was much struck by the facility with which foreign pictures and manufactures were copied by the craftsmen of the imperial household; and some years later, the French physician Bernier repeats the observation. As Sir George Birdwood remarks, the Hindus have 'a natural capacity for assimilating foreign forms.'

The so-called 'Annunciation.'

The frescoes in 'Miriam's House' at Fatehpur Sīkri are as curious as those of Akbar's bedroom. One, painted on a panel over the doorway in the north-western angle of the building, has been dubbed 'the Annunciation' by the guides. The picture represents two winged angels, seemingly engaged in the delivery of a message to some person under a canopy. It is possible that the current name of the composition may be correct, but the work is so seriously damaged that the interpretation must remain doubtful. The popular notion that the queen who bore the title of 'Miriam of the Age' was a Christian is absolutely baseless. But there is no doubt that Akbar took the liveliest interest in foreign religions, and was much pleased with Christian and Buddhist pictures.

Akbar's patronage of painting.

The liberality of Akbar's patronage of painters is recorded by his minister, Abul Fazl, who writes:—

> 'His Majesty from his earliest youth has shown a great predilection for the art, and gives it every encouragement, as he looks upon it as a means both of study and amusement. Hence the art flourishes, and many painters have obtained great reputation. The works of all painters are weekly laid before his Majesty by the *dârôghas* and the clerks; he then confers rewards according to the excellence of workmanship, or increases the monthly salaries. Much progress was made in the commodities required by painters, and the correct prices of such articles were carefully ascertained. The mixture of colours has especially been improved. The pictures thus received a hitherto unknown finish. Many excellent painters are now to be found, and masterpieces, worthy of a Bihzâd [a Persian painter, who lived about A.D. 1500], may be placed by the side of the wonderful works of the European painters who have

obtained world-wide fame. The minuteness in detail, the general finish, the boldness of execution, &c., now observed in pictures are incomparable; even inanimate objects look as if they had life. More than a hundred painters have become famous masters of the art, whilst the number of those who approach perfection or of those who are middling is very large. This is especially true of Hindus; their pictures surpass our conception of things. Few indeed in the whole world are equal to them' (*Ain-i-Akbarī*, sec. 34).

Failure to found a national school of Indian painting.

This interesting passage proves that the Mughal school of painting was inspired by European as well as Persian models. The comprehensiveness of the scheme of colour in the Fatehpur Sikri frescoes is clearly a result of the study of European art. Although the imitative Hindus attained conspicuous skill in the assimilation of foreign artistic methods, no genuine school of Indian painting was founded by Akbar's well-meant efforts. India has never produced an artist of original genius in either painting or sculpture; and to this day the inhabitants of Hindustān, even the most highly cultivated, are singularly indifferent to aesthetic merit, and little qualified to distinguish between good and bad art. The same defect in the Indian mind existed in the days of Akbar, and nullified his attempt to found and establish a national school of art. The pictorial decorations of the Mughal palaces, so far as they are Indian work, are merely commissions executed by clever copyists to gratify the caprices of a royal master. The art of miniature painting still lingers at Agra and Delhi, and the few craftsmen who practise it produce pretty, but feeble and lifeless works, of more interest to the curio-hunter than to the historian of art. The encouragement of artists by the Mughal emperors resulted in the production of numerous exquisitely illuminated manuscripts for the royal libraries, but of these sumptuous productions comparatively few survive. An exceptionally fine collection of works of this class has been presented by a Muhammadan gentleman to the city of Patna.

Mughal sculpture; the elephants at Delhi.

The Mughal sovereigns, following the practice of the Persian Shiah Muhammadans, who little regarded the Korānic prohibition of images, not only made free use, as we have seen, of pictures delineating human and animal forms, but occasionally summoned the aid of the sculptor's art for the decoration of their palaces. The two life-size statues of elephants with riders, originally set up at Agra, probably by Jahāngīr, of which portions are preserved in the public gardens at Delhi, were the most notable efforts of the sculptors of the Mughal

period. The French traveller, Bernier, who saw them in A.D. 1663, was much impressed by their merit, and observed :—

'These two large elephants, mounted by the two heroes, have an air of grandeur, and inspire me with an awe and respect which I cannot describe[1].'

Bas-reliefs at Nūrmahal. The Sarai, or travellers' rest-house, at Nūrmahal in the Punjab, built in the reign of Jahāngīr, is remarkable for its sculptured front.

'The whole front is divided into panels ornamented with sculpture; but the relief is low and the workmanship coarse. There are angels and fairies, elephants and rhinoceros, camels and horses, monkeys and peacocks, with men on horseback, and archers on elephants. The sides of the gateway are in much better taste, the ornament being limited to foliated scroll-work with birds sitting on the branches. But even in this the design is much better than the execution, as there is little relief[2].'

Pictured tiles at Lahore. In this connexion mention may be made of the unique tile work on the north and west sides of the inner wall of the Lahore Fort, believed to have been executed in the reign of Jahāngīr. An enormous space, more than a quarter of a mile in length and 17 yards high, was decorated with enamelled tiles, exhibiting not only geometrical and foliated designs, but figures of living beings.

'Many of the scenes represented possess also considerable historical interest, illustrating the life of the Mughal emperors. Several specimens represent elephant fights, which were one of the chief recreations of the Mughal court, and one of the finest panels shows four horsemen playing Chaugān or Persian polo.'

Dr. Vogel has succeeded in securing tracings of 116 panels[3].

Rarity of specimens of minor arts. When the antiquity and high standard of Indian civilization are considered, the almost absolute non-existence of examples of the minor arts dating from past ages is astonishing. The only ancient pottery discoverable is that found in prehistoric cemeteries and megalithic tombs. With the exception of the enamelled tiles already mentioned, no examples of old Indian ceramic work with any pretension to artistic merit seem to exist, and the tiles, even if actually made in India, are essentially foreign. India never had indigenous art pottery. For ceremonial reasons Hindūs always have been in the habit of using the cheapest unglazed earthenware pots, which could be used once and then thrown away without appreciable loss.

[1] See Keene's *Handbook to Delhi*, App. A. These statues have recently been restored.

[2] Cunningham, *Reports*, xiv, 62.

[3] *Progress Report of Archaeol. Surveyor, Punjab*, for 1901–2.

People with such a habit had no inducement to design art ware intended for permanent preservation. But side by side with the coarse earthenware pots, Hindus, from time immemorial, have been accustomed to use vessels of metal—gold, silver, copper, brass, and other alloys. We might expect to find numerous ancient examples of metal vessels employed in domestic service or the worship of the gods, but as a matter of fact such examples are of the utmost rarity. The only really ancient domestic utensil known seems to be the engraved *lota*, or waterpot, found in 1857 in Kulū in the Punjab, and now in the Indian Museum at South Kensington. The shape of this unique vessel is exactly the same as that of the common pots now in use. Its approximate date is determined by the engraving, which consists of a processional scene treated after the manner of the Sānchī and Bharhut bas-reliefs, and indicates that the work may be attributed with some confidence to the second century B.C.

Very little of the sumptuous metal ware which served the needs of the luxurious princes and nobles of the imperial court seems to have escaped the melting-pot. Sir George Birdwood has figured a beautiful silver *hukka* bowl, decorated with transparent enamel, belonging to the Royal Collection, and dating from 'the best Mughal period,' but examples of work of that age are very rare.

Jewelled jade. The art of decorating jade vessels with gems is an invention of the Mughal period, which may have been due to either the European or the Indian jewellers in the service of the court. Two priceless specimens of this costly art—a bowl and a plume—are in the Indian Museum at South Kensington, and have been figured in Sir George Birdwood's book.

Rock crystal. Several examples of small caskets and receptacles made of rock crystal have been found in ancient Buddhist *stūpas*. By far the most ancient, as well as the largest and most important of these, is the covered bowl which accompanied the relics of Buddha in the Piprahwa *stūpa* mentioned above. This bowl is $3\frac{1}{4}$ in. in diameter, and, including the cover, stands $3\frac{1}{2}$ in. high. The cover, which fits with perfect accuracy, has a handle in the shape of a fish, hollowed out, and stuffed with stars of gold-leaf. The crystal bowl and the steatite vases accompanying it are all turned on the lathe, and we thus learn that the Indian lapidaries were familiar with the use of the lathe in or about 450 B.C.

The skill of the ancient craftsmen in shaping, polishing [illegible] piercing gems of extreme hardness, is attested for the sam[illegible]

remote date by the treasure accompanying the Piprahwa relics, as well as by other similar finds of later date. The combined testimony of ancient literature and archaeology proves that jewellery of an elaborate kind was used freely in India from very early times, but our knowledge of the actual forms of ancient jewellery is chiefly derived from bas-reliefs and the Ajantā paintings. The discovery a few years ago in Peshāwar District of some fine specimens of complete necklaces and pendants of complex design stands alone. These ornaments, which have been described and illustrated by Mr. Marshall, were associated with Kushān coins, and may be assigned to the third century A.D. Seals and engraved gems of varying degrees of merit have been found at many ancient Indian sites, and Dr. Stein's researches have disclosed the existence of similar objects in the ruins of the sand-buried cities of Chinese Turkistan. In that region, as in India, the best examples are Hellenistic in design.

VINCENT A. SMITH.

AUTHORITIES

The literature of Indian Archaeology is of such enormous bulk that a complete enumeration of the items would fill a volume. The official publications of the Archaeological Survey alone comprise Cunningham's *Reports*, twenty-three volumes; Vincent Smith's *General Index* to the same, one volume; and the *Imperial Series*, about thirty volumes large quarto, by various authors; besides other series and numerous minor and miscellaneous works issued by Local Governments. Since the reorganization of the Archaeological Survey by Lord Curzon, two *Annual Reports*, for 1902–3 and 1903–4, have appeared, edited by Mr. Marshall.

The voluminous *Journals* and *Proceedings* of the Asiatic and Oriental Societies of England, India, and Europe, as well as the thirty-four volumes quarto of the *Indian Antiquary*, are full of innumerable articles on the subject.

The following works, not included in the regular series of *Reports*, will be found specially useful:—

CUNNINGHAM, *Bhilsa Topes; Stūpa of Bharhut; Mahābodhi.* FERGUSSON, *Tree and Serpent Worship*, 2nd ed., 1873 (for Sānchī and Amarāvati). FERGUSSON and BURGESS, *Cave Temples of India.* BURGESS, *Notes on the Buddha Rock Temples of Ajantā* (Bombay, 1879). GRIFFITHS, *The Paintings in the Buddhist Cave Temples of Ajantā* (two vols., atlas folio, London, 1896). GRÜNWEDEL, *Buddhist Art in India*, ed. Burgess, transl. Gibson (London, 1901; with a copious bibliography). FOUCHER, *L'Art Gréco-Bouddhique du Gandhāra* (only vol. i yet published). COLE, *Reports on the Preservation of National Monuments, India*, ten parts (ancient and Muhammadan), and GRIGGS's *Preservation of Indian Monuments*, 100 plates. VINCENT SMITH, *The Jain Stūpa and other Antiquities of Mathurā* (Allahābād, 1901). E. W. SMITH, *Fathpur-Sikri*, four vols. quarto; and *Moghal Colour Decoration of Agra*, one vol. quarto. LE BON, *Les Monuments de l'Inde* (Paris, 1893). MAINDRON, *L'Art Indien* (Paris, 1898).

CHAPTER IV

NUMISMATICS

I. The Ancient Coinage of Northern India

FOR more than seventy years the varied coinages of India, which extend over a period of about 2,500 years, have been diligently studied by a multitude of collectors and scholars, whose labours have had a great share in the gradual recovery of the long-lost history of ancient India. For some obscure periods, indeed, our knowledge is derived almost exclusively from coins, the only contemporary documents now surviving. But, although much has been done, the numismatic field is so vast, and the difficulties of its thorough exploration are so great, that ample scope remains for further researches. In the following sketch an attempt is made, so far as the prescribed limits of space permit, to give a general view of the evolution of Indian coinage. The historical results of numismatic investigations are embodied in the chapter devoted to the early history of the country. Introductory.

The introduction into India of the use of coins, that is to say, metallic pieces of definite weight authenticated as currency by marks recognized as a guarantee of value, may be ascribed with much probability to the seventh century B.C., when foreign maritime trade seems to have begun. There is reason to believe that the necessities of commerce with foreign merchants were the immediate occasion for the adoption by the Indian peoples of a metallic currency as well as of alphabetical writing.

Coinage, as Mr. James Kennedy justly observes, is, according to Oriental ideas, 'the business, not of the state, but of the banker and merchant[1].' In accordance with this principle, the earliest Indian currency was struck by private persons, not by governments. This consists of bits of metal more or less rectangular in shape, and trimmed when necessary at the corners so as to scale the required weight. Sometimes the coins 'Punch-marked' coins.

[1] 'Early Commerce of Babylon with India,' *J. R. A. S.*, 1898, p. 281.

are altogether blank, more frequently they are blank on the reverse only, and, more frequently still, the reverse is impressed with one or two small marks, struck by a punch. The obverse commonly exhibits many such marks, impressed by separate punches at different times. This ancient coinage is therefore generally described by numismatists as 'punch-marked.' The Laws of Manu denote coins of this kind as *purānas*, or 'eldlings,' and Southern writers call them *salākās*, or 'dominoes.'

The metal is usually impure silver, containing about 20 per cent. of alloy. The silver was evidently prepared as a plate, which was then cut up into strips from which the bits were divided. Silver was never produced to any considerable extent in India, but has always been, as it still is, one of the chief items in the list of imports. Silver coins, consequently, cannot have come into use until silver was freely imported, and if that metal was not available before 700 B.C. no silver coins can be of earlier date. Mr. Kennedy's suggestion that the punch-marked coins were copied from Babylonian originals after the opening of maritime trade in the seventh century B.C. has much to recommend it, although it cannot be regarded as proved.

The most archaic-looking coins known are punch-marked copper pieces, found at extremely ancient sites near Benares. They are much more elongated in form than the silver pieces, and seem to have been cut from a bar and struck to a different scale of weights. These rare copper pieces are possibly older than any silver coin, and may be a memento of Babylonian trade by overland routes[1]

The marks on the punch-marked coins, whether silver or copper, are extremely numerous and varied. They comprise rude outlines of men, animals, trees, the sun, and a variety of miscellaneous objects. Mr. Theobald has catalogued about 300 of these devices[2]. Legends are always absent. Punch-marked coins of roughly circular shape occasionally occur, and are probably a later development of the rectangular bits.

The silver coins, of which the best specimens weigh about 55 grains or $3\frac{1}{2}$ grammes, are so adjusted in weight as to be the approximate equivalent of thirty-two *ratī* seeds (*Abrus precatorius*). The *ratī* may be rated as averaging about

[1] At Bairānt, a very ancient site in Benares District, Carlleyle found twenty of these copper pieces, but only four silver punch-marked coins (*Arch. S. Rep.*, xxii, 114). See also *J. A. S. B.*, 1897, pt. i, p. 298, pl. xxxviii.

[2] *J. A. S. B.*, 1890, pt. i, pl. viii–xi.

1·80 grains. The entire system of the ancient Hindū coinage of Northern India was based on the weight of the *ratī*. In the South other seeds served as a metric basis.

Cast coins. Cast coins, usually of copper or bronze, were largely used in Northern India along with the punch-marked currency. A few specimens are inscribed with characters dating from about 300 B.C. Sometimes the metal, while in a half-fused state, was struck with a small die, which produced a square or circular incuse hollow. Coins of this kind, which were frequently struck in the second century B.C., may be designated as 'hot-stamped.' An interesting series, belonging to the great city of Taxila in the Punjab, enables us to trace the development of regular double-die coins through the 'hot-stamped' and 'single-die' stages. The final adoption of the 'double-die' system was undoubtedly due to Greek and Roman example.

Alexander's victorious progress through the Punjab and Sind from March, 326, to September, 325 B.C., produced little direct effect on the Indian coinage. A chieftain in the Salt Range, named Sophytes (Saubhūti), issued a few silver pieces in Greek style, suggested probably by the well-known 'owls' of Athens; but, on the whole, the indigenous currency, like the other institutions of India, was unaffected by the great Macedonian's feat of arms. Immediately after his death (323 B.C.), the territories east of the Indus, which he had intended to annex permanently, were reconquered by the Indian Chandragupta, who became the first emperor of India, and administered his dominions on native principles. Not a trace remained of Alexander's governors, garrisons, or institutions.

Bactrian coins. In the middle of the third century B.C. the independent Bactrian kingdom was separated from the Seleucid empire of Syria, and in the following century several Bactrian monarchs, notably Eucratides and Menander, made incursions into India, where their coins are now found. Scions and connexions of the Bactrian royal family established themselves as rulers of principalities in the countries now known as Afghānistān, Baluchistān, and the Punjab, which became Hellenized to a considerable extent.

These princes issued an abundant currency, chiefly in silver and copper, modelled on Greek lines, and up to about 150 B.C. exhibiting a high degree of artistic merit. Some of the foreign kings on the border adopted the characteristic Indian square form for their coins, which in other respects also indicate the influence of Indian ideas. Bilingual legends were adopted to meet the convenience of a mixed population, and the devices

reproduced familiar Indian objects. The later Indo-Greek issues are semi-barbarous in style.

The Punjab excepted, India was little affected by the ideas of the West, and the vast populations of the interior continued their purchases and sales through the medium of the indigenous private currency. For this reason no coins are known bearing the name of Asoka (272–232 B.C.), or of any other member of the Maurya dynasty founded by his grandfather Chandragupta.

The working of Greek influence may perhaps be traced in the fact that the coins erroneously attributed by some authors to the Sunga dynasty (circa 188–76 B.C.) bear the names of kings, Agni-mitra and others. The coins of the later Andhrabhritya (or Āndhra) dynasty (circa A.D. 90–220), which are Northern in type although geographically belonging to the South, also frequently record the name of the reigning sovereign. But the old system of private coinage continued in many localities, and was still in full force in Central India at the time of the English conquest[1]. To this day the people of Bihār and Gorakhpur prefer the unauthorized 'dumpy pice' made at private mints in Nepāl to the lawful copper coinage of the British Government.

Kushān coins.

The conquest of the countries now known as Afghānistān and the Punjab by the chiefs of the Kushān clan of the Yueh-chi horde, about the middle and close of the first century A.D., brought India into relation with the Roman empire as extended eastward by Augustus and his successors. The prince, whom European scholars conveniently designate as Kadphises I (circa A.D. 45–85), annexed the Kābul valley and surrounding regions to the Kushān empire, and issued copper coins bearing on the obverse a king's head palpably imitated from that of Augustus, and on the reverse a figure of the king seated on a Roman curule chair.

His son, successor, and namesake, Kadphises II (circa A.D. 85–125), the conqueror of Northern India, carried much farther the imitation of the imperial Roman coinage, and struck a large number of gold pieces, both *aurei* and double *aurei*, exactly agreeing with their Roman prototypes in weight, though considerably inferior in purity.

The testimony of Pliny that in his time (A.D. 77) a copious stream of Roman gold flowed eastward is abundantly confirmed by the numerous hoards of Roman coins which have been discovered both in Northern and Southern India. In the

[1] Malcolm, *Central India*, ii, 84.

South, the imperial coins probably circulated at the ports as English sovereigns now circulate on the continent of Europe. In the North, large quantities of the Roman gold were probably melted down and reissued. The Kushān coins, although Roman *aurei* in weight, are mainly Oriental in style, and not merely slavish copies of Roman models. The constant reverse device on the pieces issued by Kadphises II is the figure of the Indian god Siva, attended by his sacred humped bull. The legends, which record the royal name and titles, are bilingual, in accordance with Bactrian practice. The obverse legend is inscribed in the Greek language and character, but the language of the reverse legend is a form of Prākrit, or vernacular Sanskrit, and the character is a form of the Kharoshthī alphabet, read like Hebrew from right to left. Kadphises II also struck an extensive copper currency, similar in general style to his gold coinage. The copper coins, which commonly show signs of long use, are found in large quantities as far east as Benares.

The Indo-Roman coinage of the Kushān dynasty, commonly called Indo-Scythian, marks an epoch in the numismatic history of India. The Kushān kings, while retaining in their coin devices many features peculiarly Oriental, definitely abandoned the native Indian tradition and adopted in essentials the European form of coin. From this time forward the principal coinages of Northern India are double-die pieces, issued by the authority of the sovereign, and usually bearing either his effigy or his name, or both.

Kadphises II was succeeded (circa A.D. 125) by Kanishka, the conqueror of Kashmīr, renowned in Buddhist tradition as the convener of the last Church Council, and the zealous patron of the newer form of Buddhism[1]. This famous monarch regarded Kābul and Peshāwar as his capital cities, and issued, probably chiefly from those mints, vast quantities of gold and copper coin. His *aurei* agree with those of his predecessor in weight and purity, but differ widely in design and legend. The obverse device of the king standing sacrificing at a fire-altar was retained as inherited from Kadphises II. The novel reverse devices, which display astonishing variety, are devoted to the representation of an eclectic assemblage of gods and goddesses, beginning with the Greek Ἥλιος and Σελήνη, the Sun and Moon, and ending with Buddha, the Sākya sage. Many of the deities represented in

Kanishka.

[1] The exact date of Kanishka is still undetermined, and Dr. Fleet believes that he preceded the Kadphises kings.

this strange company, such as Nanaia, Oesho, and others, are plainly Zoroastrian. Kanishka was apparently a fire-worshipper at first, and was converted to Buddhism in his later years. The legends on both sides of Kanishka's coins are in Greek characters only, and the title βασιλεὺς βασιλέων, 'king of kings,' although occasionally expressed in the Greek language, is usually translated into a tongue which may be described as a form of Old Persian. The abundant copper, or bronze, coinage of Kanishka resembles the gold.

Huvishka. The coinage, in both metals, of his successor Huvishka (acc. A.D. 153) is similar in general style. It agrees exactly in weight and purity with that of Kanishka, but is perhaps slightly inferior in execution. On the gold coins the king's bust is substituted for the standing figure; and on the bronze coins the monarch is depicted riding an elephant, or sitting cross-legged, or perched on the edge of a throne with one foot hanging down and the other tucked up. The reverses, like those of Kanishka's coins, exhibit an eclectic assemblage of deities, Greek, Persian, and Indian. The legends are in the Greek character.

Vāsudeva. With the accession of Huvishka's successor, Vāsudeva (circa A.D. 185), marked decadence sets in. The *aurei* retain their old weight, but each contains nearly ten grains less of pure gold. Vāsudeva reverted to the obverse device of the standing king sacrificing at an altar, as favoured by Kanishka, and to the reverse type of Siva with his bull, as used by Kadphises II. The eclectic pantheon of the two immediately preceding reigns has disappeared. The execution of Vāsudeva's coins is semi-barbarous, and his authentic issues are succeeded by a crowd of wholly barbarous imitations, many of which are copied from Sassanian models. The Hellenic tradition is maintained only by the use of corrupted Greek characters in the legends. The reign of Vāsudeva terminated about A.D. 225.

Nearly a century later (A.D. 320) a new imperial dynasty arose. The founder of the line assumed the name, Chandra Gupta, of the first Indian emperor, and fixed his capital at Pātaliputra, the ancient seat of empire. His son, Samudra Gupta, carried his victorious arms to the extremity of the Peninsula (circa A.D. 330), and the next emperor annexed Gujarāt and Kāthiāwār, to the shore of the Arabian Sea. In the reign of the fifth monarch the imperial power was shattered (circa A.D. 480) by the White Huns, whose fierce hordes had broken through the north-western passes, deluging the land with barbarism. India then reverted to her normal condition,

and again became a geographical expression for a seething mass of ill-defined and loosely organized petty states, engaged in unceasing internecine war, uncontrolled by any paramount authority.

Gupta coins.

The historical events thus briefly outlined are reflected in the coinage. Gupta gold coins, which Sir A. Cunningham considered to be the most interesting series in India, are in the main a continuation of the Kushān coinage; and those struck during the time of the great emperors of the dynasty continued to be Indo-Roman *aurei* in weight, although, with one exception[1], appreciably inferior in purity to the Kushān issues. The devices display a surprising variety on both the obverse and the reverse, and are in some cases more artistic than anything that had been seen in India since the days of the Bactrian monarchy.

Recent researches indicate that a marked revival of Sanskrit, as distinguished from the Prākrit or vernacular, took place between A.D. 350 and 450 under the patronage of the Gupta emperors, who felt a personal interest in literary and artistic movements. The artistic merit of the best Gupta coins seems to be closely related to the literary revival which found its highest expression in the poems of Kālidāsa[2]. The favour in which classical Sanskrit was held in those days is clearly indicated by the coin-legends, which are expressed in neither Greek nor Prākrit, but in formal Sanskrit written in accordance with the grammarians' rules. But the glory of this literary and artistic revival did not last long. The coinage shows signs of decadence early in the fifth century, and the final victory of the Huns about A.D. 480 swept away nearly all manifestations of intellectual and imaginative effort.

The rich variety of the earlier Gupta gold coin devices gradually settled down into one pattern, with the standing king for the obverse, and a goddess seated on a lotus flower for the reverse type. These two designs dominate the coinage of Northern India for centuries. The standing king is seen in a corrupt form on innumerable nameless coins, and may be traced in the provincial coinage of Kashmīr as late as 1339 (*C. M. I.*, p. 37). The seated goddess became the fashionable reverse device for the mediaeval Hindu dynasties, and even appears on coins struck at Kanauj by the Muhammadan king Muhammad bin Sām in 1194 (*Thomas*, p. 20).

[1] Prakāśāditya.

[2] See Bhandarkar's essay, *A Peep into the Early History of India* (Bombay, 1900).

The rare copper coins of the Gupta dynasty, though curious and not without interest, are devoid of artistic merit.

The Gupta silver coinage is imitated from that of the foreign Saka Satraps of Surāshtra or Kāthiāwār, whose dynasty, after enduring for three centuries, was overthrown by the third Gupta emperor about A.D. 390.

Satrap coins.

The Satrap coins are hemidrachmae, weighing from 30 to 36 grains. Their pedigree may be traced back to the Indo-Greek issues of Hyrcodes and Apollodotus Philopator. A vestige of the Hellenic tradition, kept alive by commerce with Alexandria, is preserved in corrupt Greek legends. The last trace of the use of the Greek alphabet in India had disappeared by A.D. 400; but the name drachma (*dramma*), as the designation of a coin, and the Greek weight-standard survived in certain regions at least until the eleventh or twelfth century.

Degraded coins.

After the fall of the Gupta empire the coinages of the countless native rulers and of the rude Hun invaders vie with each other in barbarous degradation. The partial restoration of the paramount power by Harshavardhana (A.D. 606) had no beneficial effect on the coinage. Certain moneys inscribed with the letter H, which have been ascribed to him, but without sufficient reason, could not be much worse executed[1].

The prevalent style in the seventh, eighth, and ninth centuries was a barbarous imitation of the Sassanian coins of Persia, which are characterized by a representation of a fire-altar with supporters. This device, introduced into India by the Huns, was so corrupted by ignorant imitators as to be often unrecognizable by eyes not trained by study of the gradual degradation of the original type.

About the end of the ninth century several Hindu dynasties of note begin to emerge. These dynasties, the Chandels of Mahoba, the Tomars of Delhi, the Rāthors of Kanauj, and the Haihayas of Chedi or Central India, introduced a new style of coin, which was first struck by Gāngeyadeva of Chedi early in the eleventh century. In consequence, apparently, of Muhammadan example, the king's name and title in three lines occupied the obverse in lieu of his effigy, the reverse device being the seated goddess of the Gupta series. As has been already mentioned, coins of this pattern were struck by Muhammad bin Sām in 1194. The latest specimen is a Chandel coin issued about 1250.

Another new type was invented by the mint-masters of the Brāhman kings of Ohind, commonly, but erroneously, called

[1] Certain coins of this monarch, resembling the Gupta silver coinage, have been discovered recently by Mr. Burn (*J. R. A. S.*, 1906, p. 843).

'the Hindu kings of Kābul' (circa A.D. 860–950), which is known to numismatists as the 'Bull and Horseman,' because the device on the obverse is a horseman, and that on the reverse a bull. This type was copied by the Chauhān kings of Delhi and Ajmer, by the early Muhammadan Sultāns of Delhi up to the reign of Balban (1265; *C. C. N. I.*, p. 69), and by the Rājās of the petty sub-Himālayan State of Kāngra. In this little kingdom it survived until the beginning of the seventeenth century (*C. M. I.*, p. 108).

II. Muhammadan and Indo-European

Muhammadan coins. In the year A.D. 696–7 (A.H. 77), sixty-four years after the death of the Prophet, the first distinctive Muhammadan coins were struck by the Khalīfa (Caliph) of Damascus. These pieces were strictly orthodox, being inscribed on both sides with pious phrases, and free from all taint of imagery. A few years later, in A.D. 712, Muhammad the son of Kāsim conquered Sind[1], and the governors set up by him or his successors issued a considerable series of coins, chiefly silver, but including some copper, which have the distinction of being the first Muhammadan coins struck in India (*C.C.N.I.*, pp. 45, 55). They are modelled on the mintage of the Khalīfas of Damascus and Baghdād, and are of some interest as giving information concerning the names of the governors and of the mint cities.

The first wave of Muslim conquest expended its force in the provinces of Sind and Multān in the Indus Valley, and made no impression on the vast mass of India. The native dynasties, Rāthors, Chandels, and the rest, went on coining rude money in their accustomed fashion, and neither knew nor cared anything about the numismatic innovations of the foreign zealots on the Indus.

Ghazni coins. The first serious Muslim attack on the interior Indian kingdoms was made towards the close of the tenth century by Sabuktagīn, king of Ghazni, who defeated a formidable confederacy of princes, and established his authority at Peshāwar. His more famous son, Mahmūd of Ghazni, devoted the greater part of his reign of thirty-two years (A.D. 998–1030) to making plundering raids into India, and has thus some claim to be regarded as an Indian sovereign. He struck coins which are remarkable for possessing a marginal legend in Sanskrit, explanatory of the Arabic inscription (*Thomas*, p. 48). His son Masaud, and his grandson Maudūd, also struck coins

[1] The name is erroneously written Muhammad Kāsim by Elphinstone and many other writers.

at the same mint, copied from the 'Bull and Horseman' type of the kings of Ohind, and did not hesitate to violate the strict rule of the Korān by placing the images of creatures on their coins. So far as is known, these are the earliest Muhammadan coins struck in India which bear images (*C.C.N.I.*, p. 60). Notwithstanding its defiance of a fundamental rule of religion, the innovation maintained its ground, and the Muhammadan kings of Ghazni and North-western India continued to use the 'Bull and Horseman' device up to the time of Balban (A.D. 1265).

Ghorī coins.

The real founder of the Musalmān dominion in India was Muizz-ud-dīn Muhammad bin Sām, otherwise known with embarrassing Oriental redundancy as Shahāb-ud-dīn, or Muhammad Ghorī (A.D. 1193–1205). His Ghazni coins follow the old style of the Khalīfas of Baghdād; but his Indian coins, which are extremely numerous, usually exhibit the Ohind device of the 'Bull and Horseman,' and are mostly composed of billon, an alloy of copper and silver, mingled in irregular and widely varying proportions. This exceedingly inconvenient currency, the value of which could only be determined by assay or touch, was borrowed from the contemporary Hindu princes, and the prejudices of the conquered Indians were further humoured by the use of bilingual legends and the native scale of weights. Certain gold coins struck by Muhammad bin Sām in the Gangetic valley actually bear the image of the Hindu goddess Lakshmī. Images then disappear from the Muhammadan coinage of India, and are not again seen until the unorthodox Akbar and his son Jahāngīr ventured to reintroduce them on some limited issues.

Slave [dyna]sty.

Altamsh (Iltitmish), the most notable of the Turkish Slave kings of Delhi, who erected the Kutb Minār, kept his mint busy during his reign (A.D. 1210–35), and emitted a copious currency, chiefly in billon, comprising many varieties. His daughter Razīa (1236–9), the only queen who ever ruled at Delhi, perpetuated her name by the issue of a few rare coins. Balban (A.D. 1265–87), as has been mentioned, was the last sovereign of Delhi to use the 'Bull and Horseman' device. He struck a large number of silver coins of orthodox type, and a few gold pieces in the same style, besides small change in copper and billon.

Alā-ud-dīn.

The next notable reign from the numismatic point of view is that of Alā-ud-dīn Muhammad Shāh (A.D. 1295–1315), the conqueror of the South. His silver, copper, and billon coins are extremely abundant, and his gold pieces are not very rare.

Some of his gold coins, inferior in purity to the standard coinage, seem to have been manufactured out of the treasure plundered from the Hindu kings of the South.

This able monarch's worthless son, Kutb-ud-dīn Mubārak Shāh (A.D. 1316–20), introduced an innovation in the Muhammadan series by reverting to the old Hindu square form of coin, which continued to be used from time to time until the reign of Shāh Jahān. **Kutb-ud-dīn.**

Muhammad, son of Tughlak (1324–51 A.D.), one of the strangest figures in history, who was 'learned, merciless, religious, and mad,' has been called by Mr. Thomas the 'prince of moneyers.' The title was justly earned by the variety and beauty of his coins, which surpass those of all other Indian sovereigns in the elegance of their Arabic legends. This mad king tried to replenish his treasury by the simple expedient of coining brass in vast quantities and ordaining that it should be accepted as silver. In order to induce his subjects to accept this arrangement, the legends on the coins informed holders that 'truly he who obeys the Sultān, Muhammad bin Tughlak, obeys God,' and enjoined upon them the Korānic command to 'Obey God, and the Prophet, and those in authority.' But pious maxims affirming the divine right of kings, even when backed by the power of a cruel despot, failed to compel the acceptance of brass as silver; and a century after the tyrant's death, 'mountains' of the rejected coins piled up in his fort of Tughlakābād testified to the failure of his crude finance (*Thomas*, p. 247, note). **Tughlak coins.**

Muhammad bin Tughlak, having gained the throne by parricide, laid great stress upon the recognition of his title by the acknowledged head of the Musalmān world—the Khalīfa of Egypt, who had succeeded to the honours formerly enjoyed by the rulers of Damascus and Baghdād. When this desired recognition was secured in about the middle of his reign, the Indian monarch discontinued the use of his own name on the coinage, and substituted that of the Egyptian Khalīfa. Coins of this class are common.

The coinage of the succeeding kings of the Tughlak and Lodī dynasties offers little of interest. Ibrāhīm, the last Lodī king, was decisively defeated at Pānīpat in 1526 by Bābar, the founder of the dynasty of the 'Great Moguls.' The coins of Bābar followed foreign models.

Sher Shāh, the Afghān rival of Bābar's son Humāyūn, is entitled to the honour of establishing the reformed system of currency, which lasted throughout the Mughal period, was **Sūri coins.**

maintained by the East India Company down to 1835, and is the basis of the existing British currency. He finally abolished the inconvenient billon coinage of mixed metal, and struck well-executed pieces in gold, silver, and copper, to a fixed standard of both weight and fineness. His silver rupees, which weigh 180 grains, and contain 175 grains of pure silver, being thus practically equal in value to the modern rupee, often have the king's name in Nāgari characters in addition to the usual Arabic inscriptions. The coins of the other kings of the struggling Sūṛi dynasty are similar, but much less numerous.

Akbar's coins.

The early issues of the great Akbar (1555–1605), the contemporary of Queen Elizabeth, closely follow Sher Shāh's models, the gold and silver coins being broad pieces with elaborately interlaced Arabic legends. His later coins are smaller in diameter.

In the thirtieth year of his reign (A.D. 1584) Akbar utilized the coinage to express his attachment to the 'Divine Religion' which he had invented. His coins were henceforward dated in the years of the Divine Era beginning with February, 1556, the first year of the reign; and Persian names of the month were substituted for the customary Arabic. Many of the coins bear the ambiguous words *Allāhu Akbar*, which may be interpreted as meaning either 'God is most great,' or 'Akbar is God,' and were probably intended to convey a double sense to the select few who had been initiated into the mysteries of the imperial creed.

Akbar, like his son Jahāngīr and his grandson Shāh Jahān, disregarded the Mosaic and Korānic prohibitions against making the likeness of anything that is in heaven or earth, and freely used the aid of pictorial art for the decoration of his palaces; but on the coinage he employed image devices very sparingly, and only on three very rare types in gold. The square coins of Akbar in gold and silver, which bear on the corners the names of 'the four companions' of Muhammad, being much prized as amulets, are frequently imitated. The long list of his mints, at least seventy in number, testifies to the extent of his empire.

Jahāngīr's coins.

Jahāngīr maintained on the whole his father's mint system, but rarely struck copper coins, which had been abundantly provided by the copious issues of Sher Shāh and Akbar. He abandoned the use of Akbar's 'Divine Year,' and expressed the date according to the ordinary Muhammadan epoch, although still continuing to employ the Persian solar year and

months for the record of the regnal years. He habitually inserted in the legends of his coins doggerel Persian couplets, which had been tentatively employed by Akbar, and was followed in this practice by many of his successors.

The issues of Jahāngīr are remarkable for their beauty and also for the introduction of a number of curiosities—the delight of the collector. His deep and abiding affection for his able consort Nūr Jahān is commemorated by the pieces struck in his later years, which bear her name in conjunction with his own. His contempt for the prohibitions of orthodoxy and his love of the bottle are recorded by the gold coins which represent the monarch sitting cross-legged on his throne, goblet in hand. Other portrait coins depict him with different accessories. He was the only Muhammadan ruler of India who ventured to place his portrait on his coins.

The much-prized zodiacal series in gold and silver was the result of a freak, which is thus described in his autobiography:—

> 'Formerly,' he writes, 'it was customary to strike my name on one side of the coin, and that of the place, and the month, and the year of the reign, on the obverse. It now occurred to my mind that, instead of the name of the month, the figure of the sign of the zodiac corresponding to the particular month should be stamped. For instance, in the month of Farwardīn, the figure of a ram; in Ardībihisht that of a bull, and so on; that is, in every month in which a coin might be struck, the figure of the constellation in which the sun might be at the time should be impressed on one side of it. This was my own invention: it had never been done before.'

Nor was it ever done again. The most nearly complete genuine series of these curiosities, which have been extensively forged, is that in the British Museum.

Shāh Jahān's coins.

The next emperor, Shāh Jahān (A.D. 1627–58), abstained from his father's numismatic eccentricities, and issued an abundant coinage in silver and gold. Some of the gold pieces are of enormous size. His copper coins are rare. A small issue of square coins in white base metal, bearing his name, struck at Sopāra near Bombay, were probably intended to supersede similar Portuguese coins current in that part of the country[1].

Aurangzeb's coins.

The coinage of the fanatical Aurangzeb (1659–1707) is, of course, strictly orthodox. Motives of reverence induced him to abstain from placing the *Kalima*, or Muhammadan confession of faith, on objects which must necessarily be handled

[1] *Sopā[illegible] and P[illegible]ṇa*, Bombay Educ. Soc. Press, p. 7, pl. ii, 9; reprinted [illegible] *R. A. S.*, 1882.

alike by the unbelievers and the faithful. His coinage is monotonous in character, and chiefly interesting for the mints, seventy or more in number, of which it records the names.

The numismatic history of the feeble successors of Aurangzeb need not be recounted in detail. It is remarkable for the fact that, notwithstanding the disintegration and disorder of the empire, the weight and fineness of the imperial coinage continued to be maintained. By gradual steps it passed into an Anglo-Indian coinage. The East India Company, which had for a long time surreptitiously copied the imperial issues, obtained in January, 1717, a formal grant of the right to coin at Bombay. Permission to copy the rupees of Arcot, near Madras, was granted in 1742, and in 1757 the Company's mint at Calcutta was legally established. Additional mints were subsequently set up in the interior at Benares, Farrukhābād, and other places. All the coins struck at these mints were copies of various Mughal issues, distinguished only by the insertion of emblems, such as the cinquefoil and lion.

The Company's coinage.

Ultimately the necessity for an authoritative currency became pressing, and the temporary expedient was adopted of selecting for mechanical imitation the Mughal coins of certain mints and years. For example, the Calcutta mint, from the year 1793, struck copies of the rupees issued in the name of the titular emperor Shāh Ālam at Murshidābād in the nineteenth year of his reign, which became known as *sikka* rupees; while the Farrukhābād mint copied the rupees of the forty-fifth year of the same monarch.

This unsatisfactory system was swept away by the legislation of 1835–6, when 'the Company established an English coinage with the head of William IV in place of the name of the Mughal emperor, and all the older issues were ordered to be suppressed.' The standard rupee thus established weighs 180 grains, or one *tola*, and contains 175 grains of pure silver. It is reckoned as equivalent to 16 annas, and the anna is subdivided into 12 pies. The legal tender is silver; but recent legislation, by restricting the volume of the coinage, has given the rupee an artificial value, and made it equivalent to the fifteenth part of a sovereign, which may now be tendered in payment of debts at the rate of 15 rupees. From 1835 the evolution of Indian coinage may be considered as closed; the currency of India from that date is a branch of that of the British empire.

The coinages of the independent Muhammadan States—Bengal, Mālwā, Jaunpur, Gujarāt, and others—which from time

to time came into being as the imperial power of Delhi was obscured, do not call for detailed notice. They are closely related to the imperial series. The octagonal silver coinage of the Hinduized Ahom dynasty in Assam is peculiar and well executed.

Modern Native States.

The coinages of the modern Native States, which were formed for the most part during the decay of the Mughal empire in the eighteenth century, are, almost without exception, crude in design, coarse in execution, and wanting in interest. In recent years many of the States have agreed to use the imperial coinage.

European coins.

The Indo-European currencies, of which a good summary account will be found in Captain Tufnell's *Hints*, may likewise be dismissed here with only a passing notice. The complicated history of the East India Company's coinage may be pursued by the curious reader in Mr. Thurston's works. The Indo-Portuguese coins, struck at seven mints, of which Goa was the principal, have been described by the same painstaking author. The Indo-Danish mint at Tranquebar produced a considerable variety of coins, many of which are now either very rare or no longer extant. The lead coins (A.D. 1640–87) are among the rarest. Coins of the same metal were also issued by the English and Dutch factories. During the seventeenth and eighteenth centuries the Dutch had mints at Pulicat, Tuticorin, and several other places in Southern India, where they struck coins in gold, silver, and copper. The Indo-French coinage minted at Pondicherry is small in volume and poor in variety. Its characteristic devices are the cock and the fleur-de-lis.

III. Southern India

The term Southern India is to be understood as a general name for the Peninsula to the south of the Narbadā river and the Vindhyan mountains, the home of the Dravidian races. This vast region, except in prehistoric times, was far less affected by foreign influence than were the plains of the North. The isolation of the South is reflected in its coinage, which was developed by the Dravidians on independent lines, and presents a general aspect differing widely from that of the North. But the isolation of the Peninsula was not absolute; and some classes of coins which, from a geographical point of view, must be included in the southern division, are, in respect of their type, to be regarded as outliers of the northern system, which followed foreign models.

The coinage of Southern India presents greater difficulties to the student and offers less reward for his labours than that of the North. The political history of the Dravidian countries is obscure, examples of really ancient coins are rare, and the comparatively modern issues which fill collectors' cabinets are ill adapted to serve as aids to the historian striving to recover the outlines of the story of a long-forgotten past. The coins are frequently extremely minute, sometimes weighing less than 2 grains; the devices are crude and indistinct; legends are commonly either absent, or too brief and enigmatical to be of use; and dates, except on certain late Muhammadan coins, are invariably lacking.

The extraordinary scarcity of really ancient southern coins may be partially explained by the destructive raids of plundering invaders from the North, who swept the country bare, and brought home untold treasure. The earliest recorded raid of this kind is that of Samudra Gupta, about A.D. 330, who penetrated nearly to the extremity of the Peninsula, and enriched his treasury with vast spoil. Nearly a thousand years later his exploit was repeated by Malik Kāfūr, who carried off to Delhi gold valued at about £3,000,000 sterling. The later Muhammadan invaders were not slow to imitate the example of their forerunners; and in 1565 the sack of Vijayanagar, one of the most magnificent cities of the world, scattered or destroyed the hoarded wealth of many generations.

Punch-marked coins of the South.

The domino-shaped punch-marked coinage, the *purānas* or 'eldlings' of the law-books, as described at the beginning of this chapter, was common to both Northern and Southern India. The ancient cast coins which circulated along with the punch-marked coins in the North do not seem to occur in the South. The date when the silver and copper punch-marked coins ceased to be current is not known, but it is probably to be placed not earlier than A.D. 200. In Coimbatore silver punch-marked coins have been found associated with denarii of Augustus, who died in A.D. 14; and similar pieces have been obtained from a megalithic tomb, which may be as late in date. In the Pāndyan kingdom of the extreme south the 'punch-marked' coins pass into very similar die-struck coins in copper, and Mr. Loventhal suggests with considerable probability that the use of the die was introduced from the North along with Buddhism. But, taking Southern India as a whole, the punch-marked currency may be said to have had no progeny. Die-struck silver coins of at all ancient date are very few and unimportant. In historical times the principal coinage of the

South was in gold not silver. At the time of Malik Kāfūr's raid (A.D. 1310) it is recorded that the southern treasure consisted exclusively of gold.

Gold coins of the South.

When or how this gold coinage originated is not known. The modern miners in the Wynaad and Kolār districts find everywhere the traces of ancient workings, and the conjecture seems probable that the discovery of the gold-mines was the immediate cause of the substitution of gold for silver in the main currency. The earliest known gold coins, which Dr. Bidie believed to date from the first two centuries of the Christian era, are slightly flattened pellets or globules of metal, bearing no device save a minute and indistinct punch mark. These curious pieces, which are extremely rare, weigh about 52 grains (3·368 grammes) each.

The southern system of coinage, like the northern, is based on the weights of indigenous seeds. The northern scale rested on the *ratī* seed (*Abrus precatorius*), which may conveniently be taken as equivalent to about 1·80 grains. According to this system the *purāna*, or silver punch-marked coin, was equal in weight to thirty-two *ratī* seeds. The southerners used as the basis of their scale the *kalanju* seed, or 'Molucca bean' (*Guilandina* or *Caesalpinia Bonduc*), weighing about 50 grains, and the *manjādi* seed (*Adenanthera pavonina*), weighing about a tenth of the *kalanju*. According to this scale, the *purāna* was roughly equal in weight to a *kalanju* seed. The standard coins, subsequently known as *pon*, *hon*, *varāha*, or 'pagoda,' usually weighed approximately 52 grains, and the small coins, the *fanams* of later times, were each a tenth of the 'pagoda' of 52 grains. This system lasted substantially unchanged up to 1833. In comparatively modern times Dutch ducats and Venetian sequins also circulated as roughly equivalent in weight to the pagoda or golden *kalanju*. Some of the more ancient gold coins are considerably heavier, ranging up to 70 grains, and it is not clear how their weight was calculated.

Among the more ancient issues, the most intelligible and interesting series is that attributable to the Chālukya dynasty, which separated into two branches—the Western, first at Vātāpi (Bādāmi), subsequently at Kalyān; and the Eastern, first at Vengi, subsequently at Rājahmundry, about A.D. 620. The coins of this series are so rare that all the specimens which Sir Walter Elliot could collect in the course of twenty-five years' search suffice only to fill one small plate[1]. The boar device characteristic of the Chālukya coinage is the origin of the

[1] *Madras J. Lit. and Sc.*, 1858, pl. i.

vernacular designation *varāha* or *varāgan* ('boar') universally applied to the peculiar gold coin of Southern India, to which the European settlers subsequently gave the name 'pagoda,' supposed to be a corruption of the word '*bhagavati*,' or 'goddess.'

Some of the earliest Chālukya pieces, dating perhaps from the sixth century, are cup-shaped, with plain reverse. The obverse is the concave side, the central figure being a boar, around which four or five other symbols have been subsequently stamped by means of smaller dies or punches. These curious coins thus exhibit a transition from the use of punches to that of a regular die. Apparently the practice of punch-marking lingered on the gold coinage long after its disuse on the silver and copper.

A few specimens of the later Chālukya issues, assigned vaguely to the period between A.D. 600 and 1000, approach the dumpy form of the modern pagoda, but are heavier in weight than the heaviest of the recent pagodas. The Chālukya boar, as well as the fish emblem of the Pāndya dynasty of the extreme south, continues to appear on Chola coins of the eleventh century, by which period the Chola dynasty of Tanjore had absorbed the Chālukya and Pāndya kingdoms.

Many of the Chola coins exhibit on the obverse an exceedingly crude standing figure, borrowed from the Pāndyas, who in their turn had imitated it from the familiar 'standing king' type of the Gupta kings of Northern India. The famous monarch Rājārājā (acc. A.D. 985) was the first Chola king to adopt this device, which was again imitated on the abundant coinage of the Ceylonese Napoleon, Parākrama Bāhu (acc. A.D. 1153). Another example of the intrusion of a northern type of coinage into the South is afforded, as already noticed, by the much more ancient Andhrabhritya, or Āndhra, coins (circa A.D. 90–220).

The coins of the powerful dynasty of Vijayanagar (circa A.D. 1340–1565), beginning with those of Bukka, the first king, constitute a long series, chiefly in gold. The coins agree in general aspect with the modern dumpy pagoda, and weigh, approximately, either 52 grains or half that amount[1]. After the destruction of Vijayanagar, in A.D. 1565, this series was extensively imitated by innumerable native chieftains, as well as by the European factories.

[1] Additional references for the Vijayanagar series are: HULTZSCH, *I. A.*, xx, p. 301, 2 pl.; ibid., xxi, p. 321, 2 pl.; ibid., xxv, p. 317, 2 pl.: RANGA CHARI and DESIKA CHARI, ibid., xxiii, p. 24, 1 pl.

The coinage of Haidar Alī and Tipū Sultān, as well as that of Krishna Rājā of Mysore, is also based on the Vijayanagar model. The imperial currency is now used in the Mysore State, but the Travancore mint still issues coinage in the southern style. Tipū's coinage is of special interest, owing to the fanciful changes introduced by him, including a new set of names for the mint towns, a special era dating from the birth of the Prophet, and a whimsical method of expressing the dates. The numismatist is thankful to find the dates given in any fashion.

The coins of the Bahmani and other Muhammadan States of the South are executed in substantially the same style as the ordinary Delhi coinage, and have no connexion with the peculiar southern system.

During the eighteenth century the currency of the Peninsula fell into a state of such utter confusion that in 1806 the English officials administering the Ceded Districts of Cuddapah and Bellary found thirty-two kinds of gold pagodas and fifteen kinds of silver rupees in circulation. Legislation passed in 1833 swept away this chaos, and made the rupees of Madras, Bombay, and Upper India equal in value and equivalent to fifteen-sixteenths of the *sikka* rupee of Murshidābād, which still continued current in Lower Bengal, Bihār, and Orissa. Acts of the Legislature, passed in 1835 and subsequent years, established the modern Anglo-Indian currency system throughout India.

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CHAPTER V

INDIAN ARCHITECTURE

To present, even in the merest outline, any satisfactory account of Indian architecture in the space allotted in the following pages may seem almost impossible. In no other country, perhaps, have so many various styles been employed, nor have developments and changes of the styles been so marked. To separate these various forms into well-defined groups with distinctly recognized characteristics, and to trace their modifications in the course of history, is the task presented to the student. To give any comprehensive outline of the development of these varieties and of their complex relations to one another would necessitate entering into details and the employment of illustrations that would be incompatible with the extent and aims of this chapter: the most that can be attempted is a sketch of the main features of architectural advancement with reference to outstanding examples, to which may be added some notices of less-known groups. For a fuller account the reader may be referred to Fergusson's *History of Indian and Eastern Architecture*.

The careful study of this art as developed in India is of extreme interest for the general history of architecture; and, whatever may be his estimate of its aesthetic qualities, the student cannot fail to realize that the designers of Indian structures attained as successfully as their Western contemporaries the aims they had before them, though they used arrangements and adopted forms and details very different from those of Occidental builders in ancient or mediaeval times. These forms and their adaptations of course require study for their proper appreciation; but once this is understood they become really interesting—for the perception of the suitability of the design to its purpose creates an interest, if not an admiration, for the whole. But besides the scientific advantages of the study, which need not be here enumerated, it has been remarked by the late Mr. Fergusson—to whose genius the science of the history of architecture owes so much—that 'it will undoubtedly be conceded by those who

are familiar with the subject that, for certain qualities, the Indian buildings are unrivalled. They display an exuberance of fancy, a lavishness of labour, and an elaboration of detail to be found nowhere else.'

Without any properly historical chronicle, our knowledge of Indian history and antiquities is hampered by difficulties not perhaps found in the case of any other country. We possess scarcely a landmark in history previous to the invasion of India by Alexander the Great in the fourth century B.C., nor do we know of an architectural monument of earlier date. For later periods there are fortunately a few examples dated by inscriptions, and for others—by applying the scientific principles developed by Thomas Rickman for the discrimination of other styles and relative ages of architectural works—we are now enabled to arrange the monuments of India with considerable certainty in chronological sequence or order of succession.

Architecture, it must be understood, is something more than the mere art of building in any form; and, if a definition is required, it must be that it is the fine art of designing and constructing ornamental buildings in wood, stone, or other material. It is thus distinct from common building or civil engineering.

Early Architecture—Wooden

It is generally conceded that in the early architecture of India, as in that of Burma, China, and Japan, wood was solely or chiefly employed; and, if brick or stone were in use, it was only as a building material for foundations and for engineering purposes. Even as late as the end of the fourth century B.C. we find Megasthenes stating that Pātaliputra, the capital of Chandragupta, was 'surrounded by a wooden wall pierced with loopholes for the discharge of arrows'; and if the capital were defended by such palisading, we may fairly infer that the architecture of the time was wholly wooden. And, for all religious or private structures in a tropical climate, wood has marked advantages over stone. On the Sānchī gateways, brick walls are represented, apparently, however, as fences or limits with serrated copings, but not in architectural structures. And at whatever date stone came to be introduced, the Hindus continued and repeated the forms they had employed in the earlier material, and preserved their own style, so that it bore witness to the antecedent general use of wood. Hence we are able to trace its conversion into lithic forms until finally its origin disappears in its absorption in later styles.

The perishable nature of this material readily accounts for the disappearance of all Indian buildings of early date. Memorial *stūpas*, it is true, have been assigned by some archaeologists to a date previous to the fourth century B.C.; but they have been excavated with so little conception of scientific method that the main result has been the destruction of such evidences of their real age as might have existed. We have thus no monument of an architectural character that we can cite as certainly belonging to a date before the third century B.C.: one to be noted presently is hardly architectural and shows but little experience in the use of stone. The transition from wood to stone was naturally, as in other countries, made gradually, and at first by the use of brick, to fill in the wooden framing of the structures.

The spread of Buddhism to the westward and, at latest, the invasion of Alexander brought India into contact with Persia, where, in the sixth and fifth centuries B.C., Cyrus and the succeeding Achaemenian kings had hewn out mausoleums in the rocks and constructed palaces with stone basements, pillars, and doorways, filling in the walls with brick, as in the earlier Assyrian buildings. These works would naturally attract the attention of Indian visitors—whether missionaries, ambassadors, or merchants; and the report of such magnificent structures would tempt Indian princes to copy them. The embassies of Megasthenes to Chandragupta, and of Deimachus to his son, were probably not the only visits of the kind during the interval between the time of Alexander and the accession of Asoka; and such visitors from the West were specially suited to convey a knowledge of Persian arts to the contemporary Indian potentates. The daughter of Seleucus Nikator, too, who was given in marriage to Chandragupta, may have helped in this.

By the middle of the third century B.C. we find the great Asoka in communication with the contemporary kings of Syria, Egypt, Macedonia, Epirus, and Cyrene; and to his reign belong the great stone pillars, with capitals of Persian type, that are engraved with his religious edicts. A convert to Buddhism, Asoka is credited with the construction, all over the country, of vast numbers of *stūpas*—monumental structures enshrining relics of Sākyamuni Buddha or other Buddhist saints; and with them were erected monasteries and chapels for the monks. We cannot positively identify any of the few still existing *stūpas* as having been actually built by him; but there can scarcely be a doubt that the sculptured rails at Buddh

Gayā and Bharhut, the caves at Barābar, and the oldest of the cave monasteries in Western India, were excavated during the existence of the Maurya dynasty, or at least within the two centuries following Asoka's accession.

It was thus partly, at least, to Buddhism, under the impulse of this powerful sovereign, that we owe the inception of all the monuments that have come down to us from that age. Buddhism had not then developed the cult of a personal Buddha farther than to reverence his relics, the representation of his footmarks, the sacred *bodhi* tree and other symbols, combined perhaps with aboriginal snake-worship. But we must keep in mind that the Jains and other sects, contemporary with the Buddhists, were also protected by this beneficent monarch, and that they raised shrines and constructed cave temples and monastic abodes for their devotees, and further, that these are now recognized by distinctive symbols, by inscriptions, or other evidences of the sects for whom they were prepared.

Stone Architecture—Stūpas

One structural building, close to Rājagriha or Buddh Gayā, is claimed as probably of earlier date than the age of Asoka. This is the great basement known as Jarāsandha-kī baithak. It is about 85 ft. square at the base, and slopes upwards from 20 to 28 ft. to a platform 74 ft. by 78 ft., built entirely of large unhewn stones, neatly fitted together without mortar, and contains fifteen small cells, mostly on the north side, each 6 or 7 ft. in length, and half that width. This is apparently the 'stone house' mentioned by Hiuen Tsiang, and the rude cavern behind it would correspond to the traditional Asura's dwelling. So far, then, as we at present know, this structure may represent the earliest *vihāra* or monastic dwelling found in India, and its resemblance to the Birs Nimrud has been pointed out by Mr. Fergusson.

On the inscribed pillars or *lāts* set up by Asoka, besides the Persian form of capital, we find the honeysuckle with the bead and reel and the cable ornaments employed in earlier Assyrian and Persian sculpture; and, though not noticed afterwards in India proper, these continued in use in Gandhāra on the north-west frontier for about four centuries, which seems to indicate that it was from Persia that these forms first came, along with the suggestion that led to the conversion in India of wooden architecture into stone. Many of these *lāts*, as they

are called, have been destroyed; but it seems probable that they stood originally beside *stūpas* or other sacred structures. Beside the great *stūpa* at Sānchī-Kānākhedā, near Bhilsa, there was found a portion of one of Asoka's pillars, with a fragment of one of his edicts upon it; but in all other cases the buildings have now disappeared.

The *stūpas* were more or less conventional or architectural representations of funeral tumuli, and were constructed for the relics of the Buddha and of his disciples. How this relic-worship originated and came to hold so large a place in the Buddhist cult we can hardly conjecture; the sentiment could not have arisen for the first time on the death of Gautama, when, we are told, eight *stūpas* were built over the corporeal relics, a ninth over the vessel (*drona*) by which they were divided, and a tenth over the charcoal of the funeral pile—the erection of such monuments must have been an established custom long before. Asoka, we are told, pulled down the first *stūpas* over Buddha's remains, and erected others, which were doubtless different and more architectural. But whether or not we shall yet discover, from actual examination, their real construction, we can hardly doubt that they formed the general model for such objects for the following centuries, and their outward appearance is often represented on later monuments.

The Sānchī-Kānākhedā *stūpas*, of which two or three were quite entire at the beginning of the nineteenth century, and the second largest of which almost certainly dates from about 200 B.C., may be accepted as examples of the Asoka pattern. On a low circular drum, a hemispherical dome was constructed, with a procession path round the latter, and over the dome a box-like structure surmounted by an umbrella and surrounded by a stone railing. Round the drum was an open passage for circumambulation, and the whole was enclosed by a massive rail with gates on four sides. The dome, surrounded by its drum or berm, was in no sense architectural, and, having but one special purpose, could convey no information as to the art of the age. The railings, however, are most interesting: they are constructed as closely as possible after wooden patterns, and are the only examples of this type that survive here or elsewhere. On the second *stūpa*, which has been badly ruined by bungling excavators, the sculptures are chiefly on discs upon the uprights of the rails; and from the difference of character, as compared with those of the *toranas* of the first and third *stūpas*, they seem to indicate an earlier stage. But these have not secured the attention they deserve, nor have they been

adequately depicted. The uprights are square, and there are as usual three rails between each, and a heavy coping or head-rail is placed over the uprights and holds them together by tenons on their upper ends.

To about the same age must belong the remains of the rail round the Buddh Gayā temple, and probably only a little later comes the Bharhut *stūpa* enclosure. The remains of a rail found at Muttra is of early Jain work, and may perhaps be placed slightly later than the last. The uprights are carved with full-length basso-rilievo figures or with discs; but the remains found there belong to a lengthened period, and the want of information as to the relative positions in which the various subjects were found deprives us of the basis of any safe induction as to the development of the art.

In the great *stūpa* at Sānchī we have something more complete: the uprights are still square, and the three cross-bars between each pair are lenticular in section; but, like the *stūpa* itself, they are of unusually large dimensions, the rail being 11 ft. in height. This, as well as the smaller rails that were formerly on the berm and round the platform over the dome, were all carved after wooden patterns. But here the erections of lofty *toranas* at the entrances formed a better field for sculpture than the rail, and it was to them that it was exclusively applied.

These ornamental gateways must have belonged to most if not to all of the larger and more notable *stūpas*; though at first they were evidently of wood, and the earliest Buddhist missionaries seem to have carried the idea of such adjuncts with them, for even in Japan they are well known at all temples as *tori-i*, and in China as *p'ai-lus* or *p'ai-fangs*, while wooden *toranas* are to be met with in villages in Rājputāna and elsewhere down to the present day—an example of what archaeology teaches, that the present is linked to the past in one chain.

The whole of the superstructure of these Sānchī examples is so essentially wooden in character that, as Mr. Fergusson remarked, 'we rather feel inclined to wonder how men dared to attempt its erection in stone, and are equally astonished that it should have stood' for twenty centuries 'nearly uninjured.'

The remains at Sānchī, however, evidently belong to a very extended period, and there are scarcely any reliable data by which to fix the dates of the earliest structures, while much has disappeared, even during the nineteenth century, that might

have aided our knowledge. The former presence of one, if not two, Asoka pillars at the great *stūpa* would point to the *stūpa* itself being in existence in his time at the latest; the rail round it may have been added subsequently, and the gateways still later; but the inscriptions on *Stūpa* No. II are in the same characters as those of the Asoka inscriptions, and the sculptures appear to be more archaic than those on the great *stūpa*, so that this rail may be the older of the two. Yet the difference may be small, for several of the inscriptions on the large *stūpa* seem to be also of the same age.

The gateways would naturally be erected last; and on the south one we find an inscription on one of the beams stating that it was the gift of an officer under Śrī Śātakarṇi, an Āndhra king who ruled about 160 B.C. The others were probably erected not long before or after this date. Of the buildings that once covered the surrounding area, the ruins of which still remain, our information is defective; but a small temple to the south-east of the great *stūpa* is probably the oldest remaining, and may go back even to the third century B.C.

The remains of the Amarāvati *stūpa* on the lower Kistna river present a still more complicated problem, for of the original work only a few archaic sculptures have survived. Its rail, at least, must have been entirely reconstructed before our era or shortly after,—the sculptures representing the veneration of relics, &c., but no representation of the Buddha; and then about the middle or end of the second century A.D. a great 'restoration' had been effected, when what has been called the inner rail—probably a wainscoting of the *stūpa* itself—was added, consisting of marble panels sculptured with those figures of Buddha, &c., that were so much favoured by the Mahāyāna school of later Buddhism.

Cave Temples

The earlier rock temples must be of about the same age as these *stūpas*. Indeed in the Barābar hills, about sixteen miles north from Gayā, we find a group of caves in three of which are short inscriptions of Asoka, dated in his twelfth and nineteenth year, and dedicating them to the Ājīvikas, who seem to have been a naked sect, founded by Makkhali Gosāla, and similar to the Jains. Close by are three more caves, dedicated to the same sect by Asoka's grandson Daṣaratha about 215 B.C. The architectural features of these caves are few: they have vaulted roofs, the walls of some of them are carefully polished, and in the ends of three of the earliest are

circular chambers or shrines, the fronts of two of which are carved with overhanging eaves. In the case of the Lomas Rishi cave, the outer apartment of which is 32½ ft. in length, the doorway is surrounded by carving which represents in stone the form of the structural *chaityas* of the age. They were apparently constructed with strong wooden posts sloping slightly inwards, supporting longitudinal rafters mortised into their heads, while small blocks at the sides were employed to keep the roof in form. Between the main posts was a framework that served to support the smaller rafters, on which lay the roof formed of three thicknesses of plank. The form of this roof was therefore a slightly pointed arch, having a ridge along the centre. The door, like the others in this group, has sloping jambs.

Now when we compare this with the façades of other early caves, we note the identity of construction. Among these the *chaitya* caves at Kondānā, Bhājā, Pitalkhorā, and No. X at Ajantā are the oldest. The excavators had not yet learnt to carve out these halls leaving a screen wall in front, or they still preferred to retain the wooden fronts. In two of them at least —that at Bhājā and the one at Ajantā—the mortises in the floor indicate clearly where the supports of the wooden screen once stood; and in the case of the Kondānā *chaitya* the remains of the wooden framework occupying the upper portion of the façade were still in existence not very many years ago, and were supported by posts rising from the floor, the heads of which were still left. In Bhājā, Kārle, Beḍsā, Kānheri, and other *chaityas*, the vault of the nave was ornamented by wooden ribs, as if for its support, which proves beyond doubt that these roofs were not copies of any masonry arch, but of a timber construction; and as time wore on we find these wooden ribs copied in stone in the cave temples of a subsequent date, as in some of the Junnar caves, which were possibly of Jain origin, and in the later Ajantā *chaityas*.

The next step was to make the pillars of the nave vertical—for they had sloped inwards in the earlier examples—and to carve the front in stone; and when we look at the instances of this in the *chaityas* at Kārle, Ajantā No. IX, and Nāsik, we trace the close imitation of previous forms. The arch represented on the front of the Lomas Rishi cave in Bihār continues to be sculptured in all its details in the *vihāras* and *chaityas* of Western India till a late date; and the few buildings pictured on the Sānchī gateways represent it as of the same form. Whence we perceive that every feature and

detail of the early caves is copied from a wooden original, and conclude that the early Hindus did not construct their architectural works—whether temples, monasteries, or palaces—in stone or brick, though for foundations and mere walls such materials may have been employed.

The façades of *chaitya* shrines were, from an early date, covered with sculpture—some of them very richly; and to protect them from the weather a screen was contrived and cut in the rock in front of the façade, with large windows in the upper half for the entrance of light; but, judging from what remains at Kārle and Kānheri, it seems to have been further faced by wainscoting or ornamentation of wood, or a wooden porch was added. In other cases a porch or veranda was only attached below, while a frieze projecting well forward above saved the front from the weather, as in the case of caves XIX and XXVI at Ajantā and the Buddhist *chaitya* cave at Ellora. The lighting of these chapel caves by a great arch over the entrance has attracted considerable attention, as being admirably adapted to its purpose. As Mr. Fergusson truly remarked: 'nothing invented before or since is lighted so perfectly, and the disposition of the parts or interior for an assembly of the faithful . . . is what the Christians nearly reached in after times but never quite equalled.'

The original outward form of the *chaitya* or chapel when constructed in wood was once a matter of some uncertainty, though the Raths at Māmallapuram (Seven Pagodas), south of Madras, supplied a key—particularly those known as Sahadeva's and the Ganeśa Rath. Each of these, however, is represented as of several storeys, and has no proper interior, so that certain of the details were somewhat conjectural; but the discovery by Mr. Cousens of an ancient structural *chaitya* at Tēr in Hyderābād territory, and of others by Mr. Rea at Chezarlā and Vidyādharapuram in Guntūr District and at Guntupalle, have fully confirmed the inferences deduced from the rock-cut examples; and that at Tēr, at least, and the Vishnu Deyyanne Dewale at Polonnaruwa in Ceylon, bear ample evidence of a wooden prototype.

Besides shrines for worship excavated in the rock, such as the Buddhist and Jain *chaitya* caves, others usually known as *vihāras* were devoted to the residence of monks and ascetics. These dwellings consisted as a rule of a hall (*śālā*) surrounded by a number of cells (*Bhikshu-grihas*) or sleeping cubicles. The earliest of these is perhaps that discovered at Bhāiā about

twenty-five years ago; it consists of a small hall about 17 ft. each way, with a veranda in front and eight cells irregularly arranged.

The Bhājā group of caves has very little figure sculpture—no other has less—and, but for the form of the *chaitya* cave and of the groups of *dāgabas*, it would be hard to ascribe it to any sect. But in this little *vihāra* cave, except the small rilievo *dāgabas*, alternating with Caryatids that support a cornice in the veranda, the sculptures are quite different from anything Buddhist. Over the pillar and pilaster capitals in the end of the veranda are sphinxes of Indian form—though derived from Persian prototypes; on the walls are five full-length armed figures, peculiarly dressed; and in the right end of the veranda are two large sculptures, one representing Sūrya the Sun-god in his chariot with attendants, and below a number of monsters; the other probably Indra on his elephant with a group of small figures. These seem to indicate a connexion with the Sauras or Sun-worshippers, who certainly formed an important religious sect in early times.

It can now no longer be assumed that all the earliest caves are of Buddhist origin; the discovery of this early excavation, together with the Ājīvika cave-shrines, suggests that other groups may have to be reconsidered. Certain of the excavations at Junāgarh are almost certainly Jain, and the Lonad cave may not be Brāhmanical. A fuller study of these, and of the sculptures in the excavations at Junnar and elsewhere, may yet lead to some changes in our classification.

Among those of Orissa we find no cave of the properly *chaitya* pattern; and as an inscription on the Hāthi Gumphā cave, near the east end of the Udayagiri hill, is of the reign of a king Khāravela of Kalinga (circ. 160 B.C.), a contemporary of Śātakarṇi the Āndhra king, thus bringing it to about the date of the south gateway at Sānchī, this is one of the most important data yet found for the chronology of Indian archaeology. It upsets the whole of the theories advanced in the *Antiquities of Orissa*, both as to the age and sect to which these caves belonged; for the Hāthi Gumphā and most of the others are not Buddhist but Jain caves—even the figure mentioned by Rājendrāla Mitra in the *Ananta-gumphā* as 'of Buddha' is certainly not Buddhist, nor is it integral, but probably Jain of a late date; while the sculptures in the veranda show no sign of either of these sects, and over one doorway is a representation of the Sun-god Sūrya in his chariot. These Orissa caves are of early date—some or

perhaps most of them Jain, and the rest of other Hindu sects; but an intelligent survey of them has still to be made, and would be of very great importance to the history of Indian art.

Gandhāra Monuments

We come next to a class of remains found on the north-west frontier of India, and generally known as belonging to the ancient province of Gandhāra. Most probably they date from the commencement of the Christian era till about the fourth century, and belong to the Mahāyāna school of Buddhism—a form of religion differing entirely from that early Buddhist cult which had no images of gods or saints, but paid reverence to relics and sacred symbols. Indeed, we have no very clear proof that any of the early Hindu religions had iconographic representations of their divinities.

Be this as it may, we find the first representations of Buddha and the Buddhist pantheon among the sculptures of the Gandhāra monasteries; and the influence of classical art manifested in many of these images leaves little doubt that they were modelled after foreign and Western patterns. The Graeco-Bactrian kingdom had passed away before the appearance of these sculptures; but Ionians and other Greeks went far and wide with their merchandise and their art-productions, and Buddhist emissaries had for long travelled westwards as far as into the Levant. But the ethical precepts of Gautama Buddha failed to satisfy the followers of the various sects that acknowledged his tenets, or those who afterwards expounded and developed them; and the Mahāyāna schools, coming in contact with Western iconography, seem to have embraced the idea of representations for their rapidly multiplying divinities—drawn from aboriginal superstitions as well as from their own legends and imaginations. The development of this pantheon is apart, however, from that of architecture.

The structures in connexion with which these sculptures are found have unfortunately been little regarded by the excavators, whose idea was mainly, if not solely, to secure as many of the sculptures as possible, irrespective of their relations to one another or to the plans, nature, use, and construction of the buildings themselves. Besides their iconographic teaching, however, the sculptures have considerable interest; for the scenes depicted have frequently an architectural setting or background in which we find pillars, cornices, façades, &c., represented; while from the débris, capitals, bases, and mouldings have been saved that belonged to the structures themselves,

and these must have borne a close resemblance to the style of the buildings of the time.

The separate capitals are distinctly Corinthian, and evidently fashioned on western models, or by western artists. They are not pure Greek, nor yet of very early Roman type, as the little figures of Buddha among the foliage indicate: similar additions were made to capitals in Asia Minor at least as early as the time of Augustus, and were prevalent in other parts of the empire for two centuries afterwards; and to this period we may on other grounds refer the monasteries at Jamālgarhi and elsewhere on the north-west frontier.

Again, in the sculptures we constantly find representations of architecture, in many of which the bell-shaped Persepolitan capital is represented, and this seems to have been introduced into India at an early date, and to have spread pretty widely in modified forms; but the Corinthian form does not appear to have extended into India proper. The Persian form of capital, and such as naturally sprang from the necessities of their own wooden construction, therefore gave rise to all the capitals employed in India. The first was the earliest form used in stone architecture in India, and it continued largely in use in Northern India till after the Christian era, and among the Gandhāra monasteries so long as they existed, while in Southern India even till now modifications of wooden forms have been almost exclusively prevalent.

The façades appearing as conventional frames for sculptured scenes represent the fronts of monastic cells, and the form of the wooden framework that filled the great arched windows of the *chaitya* temples is that represented in these Gandhāra sculptures.

One other type of column, found at Shāhdheri, in the Punjab, is of the Ionic order—the base of the pure Attic type, and the capital with volutes. This is, perhaps, as old as any of the Gandhāra remains, and is a further indication of Western influences. But the remarkably classical character and interest of the Gandhāra sculptures generally makes their age a question of the utmost importance, and this has of late been approaching solution. The era in Western history when Greek art in its minor examples became an object of export; the introduction of a pantheon into Buddhism; and the dates found on, or in connexion with, several of the sculptures, if reckoned from the Saṁvat epoch of 57 B.C., all seem to converge on the period of about three centuries between A.D. 50 and 350. The monastic establishments of the Buddhists

about Peshāwar and to the west and north must have been very flourishing, and their artistic ornamentation very rich—everywhere covered with carving and gilding. The sudden appearance of representations of Buddha and numerous Bodhisattvas in these establishments, and the Hellenic impress in the sculptures, may raise the question whether iconography in its wider extent, Brāhmanic as well as Buddhist, was not imported from the West.

Probably to about the same age as the Gandhāra remains belong the *stūpas* at Mānikyāla, between the Indus and Jhelam rivers, excavated by General Ventura and M. Court about 1830. Some of them contained coins of Kanishka, and the inference is that they date from the second century; but only the great Mānikyāla *stūpa* had any portion of the outer covering left, and that seems to have been added as the facing of an envelope, 25 ft. in thickness, placed over a smaller *stūpa* at a much later date, possibly in the eighth century.

Gupta Architecture

By about the fifth century the architectural forms had developed in richness of decoration and variety. For convenience the prevalent style of this later age is sometimes called Gupta, for from about A.D. 319 to 520 the principal ruling dynasty in Hindustān was that of the Guptas, but the style continued long after their extinction. The columns have higher square bases than before, and sometimes a sur-base; the capitals, which previously had a vase as the chief member, were developed by a foliaged ornament, springing from the mouth of the vase and falling down upon it from the four corners, and so lending strength to the neck whilst converting the round capital into a square support for the abacus. Often, too, a similar arrangement of foliage was applied to the vase so frequently used in early bases, and this form quite superseded the Persepolitan pillar, with its bell-shaped capital, which now disappeared from Indian art. The shafts were round, or of sixteen or more sides; pilasters were ornamented on the shafts, and the *śikharas* or spires of the temples were simple in outline, and rose almost vertically at first and curved inwards towards the summit, which was always capped by a large circular fluted disc supporting a vase, whilst the surface of the tower was covered with a peculiar sort of horseshoe diaper, which was usual in early times. This style prevailed all over Hindustān, and was continued with modifications varying with age and locality down almost to the Muhammadan conquest, being

often best marked in Jain structures. How far south it extended is uncertain; for but few examples have survived of the many that must have existed previous to the fourteenth century, when the Muslim armies desolated the Deccan and ruined the Hindu shrines.

Whether the Buddhist *chaitya* temple, with its nave and side aisles, its sacred *dāgaba* in the apse, and circumambulatory passage, was derived from an early Hindu form, or vice versa, we can trace the connexion in plan between the early Buddhist shrines and the later Jain and Hindu temples. This is, perhaps, most distinctly brought out in the old Vaisnava temple at Aihole in Dhārwār, belonging to about the year A.D. 700. There the nave has side aisles lighted through the walls of the temple, which was impossible in the rock-cut chapels; the *dāgaba*, or *chaitya* proper, is superseded by a *cella* for the image with a semicircular back, also separated from the outer wall by the continuation of the aisles in the passage for *pradakshiṇā* or circumambulation; this passage also is lighted from without. In front is a porch, and round the whole is a raised veranda on square pillars and plain bracket capitals. How the *śikhara* or spire and roof of this early temple were finished, we have, unfortunately, no means of knowing, as it was long since ruined to convert it into a place of defence in the troublous times of a century ago: careful removal of the débris that covers it might, perhaps, reveal part of the structure of the spire.

If we turn next to the temple of Pāpanātha or Sangamesvara, at Pattadkal, which is also of early date—leaving out of consideration the large square outer *mandapa* that has been joined to it as a great portico—we find the plan almost repeated, except that the shrine or *cella* is now square, and the passage behind it narrower than the side aisles, but still lighted as at Aihole. The next step was to widen the temple by double side aisles, as in the temple of Virūpāksha at the same place, belonging to the Dravidian style, and built in the latter half of the eighth century; and from this plan we see how readily the later temples all over the country—both Hindu and Jain—were evolved.

Kashmir Architecture

From the eighth century, if not earlier, till about the Muhammadan conquest, we find in Kashmīr and the vicinity a style of architecture having in it a certain classical element, which at once reminds us of more western forms and has little if any connexion with the art of the rest of India. No sufficiently

complete examination has yet been made of the examples of this style, and the hypotheses of unscientific surveyors are of doubtful value. A full knowledge of the details and peculiarities of such a quasi-classical style would afford valuable data for the history of architecture in this region.

The most notable type of this Kashmīr style is the temple of Mārtand, about three miles east of Islāmābād or Anantnāg, the old capital. It stands in a court about 220 ft. by 142 ft., surrounded by the ruins of some eighty small cells, with a large entrance porch at the east end. The temple itself was 60 ft. long by 38 ft. wide, with two wings, and consisted of two apartments—a *naos* and a *cella*. The trefoiled or cusped arch on the doors of the temple and cells is a striking peculiarity of the style, and may perhaps have been derived from the section of the Buddhist *chaitya*. It is used decoratively, however, rather than constructively. The pillars and pilasters of the portico and temple bear a close resemblance to some of the later forms of the Roman Doric, and have usually sixteen shallow flutes on the shafts, with numerous members in the base and capital. A triangular pediment surmounts the doorways, and on gable-ends or projecting faces are representations of double sloping roofs, much in the style of modern Kashmīr wooden roofs, and of which many of the temple-roofs in Nepāl are also exaggerated examples. The Mārtand temple has long been roofless; but the probability is that when built in the eighth century (A.D. 725–60) it had a sloping wooden roof, while the cells surrounding the court were small enough to be covered by flat stone roofs. The name given it implies that it was a temple of the Sun, and we know that, till the eleventh century at least, the worship of the sun was very prevalent in the north-west of India.

It was contended by General Cunningham that this and other Kashmīrian temples of the class, at Avantipur, Bhanyur, Vāngath, Pāndrethan, &c., were Nāga or snake shrines, because he supposed they had originally been surrounded by shallow basins of water, kept at a uniform level, and approached by raised pavements across the courts. But there is no proof of this; nor does their situation render it at all probable that the traces adduced in support of his theory were other than necessary drainage arrangements. Snake-worship, indeed, appears as early as the *Yajurveda*, and probably was prevalent among the original inhabitants of Kashmīr; but surrounding water was not an indication of a Nāga shrine. The sculptures here are much decayed, and have not been represented in such detail as to indicate the divinities wor-

shipped. We do know, however, from history that all the older examples must have been erected between A.D. 720 and 1000.

Jain Temples in Kanara

Another departure from the style of Hindu architecture has been remarked in certain Jain temples and tombs at Mūdbidri in South Kanara. These works have double and triple sloping roofs; indeed the tombs consist of a basis with quite a series of converging roofs, and remind us at once of Nepāl *chaityas* or Chinese towers. The whole style, in the form of the pillars of the temples, the blinds between them, and the reverse slope of the eaves above the veranda roof, is closely in imitation of wooden originals, and must have been copied either from a foreign source or from local wooden models; and one has only to notice the style of the native thatched dwellings to see whence these forms were directly derived. The interiors of the Kanara temples are often very rich in carving, the massive pillars being sculptured like ivory or the precious metals.

Associated with these temples are elegant monolithic pillars placed on square bases, the shafts richly carved and the capitals wide-spreading, and supporting, on four or five very small colonnettes, a square roof elaborately modelled. These *stambhas* or pillars are the representations of the early Buddhist *lāts* and other columns raised at their temples. We had an example of a Jain *stambha* in the Indra Sabha court at Ellora, and of a Brahmanical *stambha* in the court of the great Kailāsa temple there. The Jain example at Ellora was of the Svetāmbara sect, while the Kanara Jains are Digambaras, and the Kanarese columns belong chiefly to the fourteenth and fifteenth centuries.

Dravidian Architecture

It would be difficult to follow a strictly chronological order in noting the development of the Hindu styles, since, though they may have reacted on one another, they developed naturally among the various races and more or less independently. We might at this point, then, take up first either the Northern or the Southern developments.

Dravidian is a term applied to the people in Southern India who speak the Tamil, Malayālam, Telugu, and Kanarese languages, and is conveniently applied to the style of art practised over the larger portion at least of the area inhabited by this race. We may trace approximately the northern boundary of the style along the course of the Kistna river, to Dhārwar District, and thence south-east, past Vijayanagar

and to the east of Sravana Belgola and north of Mysore city westwards to the coast. Much of the Kanarese country lies to the west of this, and part of the Telugu area to the north of it. Of course examples of the style are to be found beyond this line, and of other styles within it. In this area flourished the early dynasties of Pāndyas, Cheras, and Cholas—the first in the south, the Cholas on the east, and the Cheras in the west. These families were often at war, and by the tenth century the Cholas had overcome the Cheras and, somewhat later, the Pāndyas.

The architecture of this area, however, was essentially different from that of other regions of India, and of one type, gradually changing, but becoming worse rather than better. So far as yet known, we cannot point to any building within the Dravidian area of very early date, or before the sixth or seventh century, if indeed quite so early. Yet there may be still unnoticed structures that careful survey may bring to light, and for the present the materials are not available to enable us to trace the evolution of the style.

One of the best-known groups of monuments in the southern part of the Peninsula is that of the Māmallapuram Raths, or 'Seven Pagodas,' on the seashore to the south of Madras. They have often been figured, by Chambers, Goldingham, Babington, Braddock, &c., but the Government survey still remains unpublished. The *raths* are each hewn out of a block of granite, but none of them has ever been quite finished, nor have any of the numerous excavated caves at the same place. How this is to be accounted for we cannot explain. They have been ascribed to various dates, some too early, others very late; the most probable view, to judge from their style and the character of the alphabets in which the inscriptions on them are carved, being that they belong to the seventh century A.D. Though evidently of Brāhmanical origin, they are certainly very like Buddhist temples as we know them from the early caves and such structural examples as have been found. But their special interest lies in their being the earliest forms of Dravidian architecture. If we compare the whole arrangement of parts in the great *rath* with some of the typical Dravidian temples, we at once see how the latter have been derived from the earlier type. The square *raths* were evidently models of Buddhist *vihāras*, and became the designs from which the temples proper or *vimanas* of Southern India were for long copied; and further, the oblong *raths*, like Arjuna's, appear to have given the first form to the great gateways or *gopurams*

which are so notable a feature in the enclosures surrounding the larger Dravidian temples.

The next landmarks in Dravidian art are the temple of Virūpāksha at Pattadkal and the rock-cut example of the Kailāsa at Ellora. The latter is well-known as a great monolithic temple hewn out of the rock, and perhaps a century older than the first. Why we find a purely Dravidian style of temple so far to the north of the Tamil country is not readily accounted for. The site was in the Rāshtrakūta kingdom, but the style of work is that of the Cholas; and we ask, was this temple the sequence of a conquest, or of an alliance, or was the architect brought from the South?

Buildings of the Dravidian style are very numerous in proportion to the extent of the area in which they are found. The temples generally consist of a square base, ornamented externally by thin tall pilasters, and containing the cell in which the image is kept. In front of this may be added a *mantapam* or hall, or even two such, but they are not characteristic of the style. Over the shrine rises the *śikhara*, of pyramidal form, but always divided into storeys and crowned by a small dome, either circular or polygonal in shape. Another special feature of these temples is the *gopurams*, or great gateways, placed in front of them at the entrances to the surrounding courts, and often on all four sides. In general design they are like the *vimānas* or shrines, but about twice as wide as deep, and very frequently far more important than the temples themselves. Another feature is the cornices of double curve; in other Indian styles the cornices are mostly straight and sloping downwards.

The style is distinctly of wooden origin, and of this the very attenuated pilasters on the outer walls and the square pillars—often of small section—are evidences. But as the contemporary Northern styles are characterized by the prevalence of vertical lines, the Dravidian is marked by the prevalence of horizontal mouldings and shadows, and the towers and *gopurams* are storeyed. Then the more important temples are surrounded by courts enclosing great corridors, or *prakāras*, and pillared halls. In the early Kashmīr temples, in many of the Jain temples of Western India, at Brindāban, at the great temple of Jagannāth in Orissa, and others—probably in early times very many more—there are courts surrounded by cells; but in the great Dravidian temples, such as those at Madura, Rāmeswaram, Tinnevelly, Srīrangam, Tiruvallūr, Chidambaram, Kānchipuram (Conjeeveram), &c., the courts are very extensive,

and are one within another. This system of enclosure within enclosure, with pillared corridors, was also carried across to Siam and Kāmboja, where the largest and most magnificently sculptured temples perhaps ever raised were executed in this Dravidian style, developed and more fully adapted to lithic materials, with complete symmetry of arrangement, a consideration disregarded in South India, where they are too often a fortuitous aggregation of parts, arranged as accident required during the long course of their erection.

The later examples of the style were overloaded with carving: every part of the building was covered with ornamentation in the most elaborate and intricate designs the artist could invent; but while the imagination may be impressed with the evidence of power and labour so lavished on ornament—much of it truly elegant—the better judgement is offended by want of architectural design in the arrangement of the constituent parts of the whole.

One of the best examples of this order is the great temple at Tanjore. It would appear to have been begun on a definite plan, and not as a series of extensions of some small temple which, by accident, had grown famous and acquired wealth by which successively to enlarge its courts, as that in Tiruvallūr seems to have grown—by a series of accretions. The body of the Tanjore temple is of two storeys and fully 80 ft. high, whilst the *śikhara* or pyramidal tower rises in eleven storeys to a total height of 190 ft. This dominates the *gopurams* over the entrances to the court in which it stands, and to an outer court, added in front of the first, but which does not, as in other cases, surround it. On the left of the principal shrine stands a smaller one of Śubrahmanya, the war-god, which is an admirable illustration of the style in its later and decorative stage, in which aspect it is as exquisite an example as exists in Southern India. The central shrine, so far as we know, was erected in A.D. 1025, and this separate one may be placed at least as late as A.D. 1150.

The Śrīrangam temple, the largest in India, is architecturally the converse of this; it is one of the latest in date, the fifth court having been left unfinished in the middle of the eighteenth century. The shrine is quite insignificant and distinguished only by a gilt dome, while, proceeding outwards, the *gopurams* to each court are each larger and more decorative than the preceding. The circumstances of successive independent additions and the ambitions of successive donors proved incompatible with any considered design or arrangement of parts.

The earlier Dravidian structures had lions or *yālis* and elephants placed as supports for pillars; and these were gradually enlarged, made affixes to pilasters or pillars, and the animal forms multiplied and conventionalized with riders and human and other figures introduced as supporters or attendants, until about the fourteenth century or earlier they had obtained a permanent place in the architecture: at a later date figures of gods, demons, and patrons or donors sometimes took their place. Well-known examples of these occur in the temples of Vellore, Madura, Vijayanagar, and Rāmeswaram.

But though we can trace the beginnings of Dravidian art back to a pretty early date, we have as yet little help in following its development up to the thirteenth or fourteenth century; and most of the temples, of which published plans and details are as yet available, belong to dates subsequent to the great Muhammadan invasions in the first quarter of the fourteenth century.

Chālukyan Architecture

Leaving the Dravidian, we come to the next great architectural area—that which Mr. Fergusson has called the Chālukyan style—prevailing over the whole of the basin of the Godāvari, the northern boundary being drawn roughly from the south end of the Chilka Lake in Orissa to the north-west, following for a considerable distance the course of the Mahānadī river, along the Sātpurā Hills to the Tāpti, and then south-west to the coast, eighty miles south of Surat.

The Chālukyan dynasty, whose name is applied to this style, begins to figure in the history of the Deccan early in the fifth century. About 615, a brother of Pulikesin II, who ruled at Bādāmi, set up an eastern kingdom at Vengi, on the lower Godāvari, and about the same time another branch of the family became established in the south of Gujarāt. The area of the Chālukyan style, then, includes the Hyderābād territory, the Central Provinces, Berār, and the Marāthī and part of the Kanarese-speaking Districts of the Bombay Presidency.

In the middle of the eighth century the Rāshtrakūtas dispossessed the Chālukyas of their territories and made them feudatory; but late in the tenth century they reasserted their power, which continued for about two centuries, and was finally overthrown in A.D. 1184 by the Hoysalas, who next ruled the south-west of the earlier Chālukya domain, while the Kākatīyas had established themselves a little earlier at Warangal

to the east. Both these kingdoms were conquered about 1320 by the Muhammadans.

The earliest temples within this area, however, are not very clearly marked off from the Dravidian and the more northern styles—some of them have distinctly northern spires, and others are closely allied to the southern style; and it was perhaps only gradually that the type acquired its distinctive characteristics. Till a late date we find temples with towers differing so little in form from Dravidian *vimānas*, that, other details apart, they might readily be ascribed to that order. Unfortunately many of the finer examples must have perished during the Musalmān invasions and during the rule of the Muhammadan dynasties of Bijāpur, Gulbarga, Bīdar, Hyderābād, and Burhānpur, and, as we might expect, round these cities most of the earlier works have disappeared. Still in Mysore, Dhārwār, and Belgaum, as well as in Berār and the Marāthā districts, sufficient remains still exist to illustrate the various developments of the style.

The old temple of Pāpanātha at Pattadkal presents a curious combination of styles. The body of the temple is Dravidian, and must have been a fine specimen, of as early a date as the early part of the eighth century; but the *śikhara* is a curious approximation to the form of the early Northern Hindu or Indo-Aryan order, while in details the temple shows a strong leaning to the Dravidian. One is almost tempted to suppose that the architect of the temple had died and left the spire to another who, having a preference for the northern form, had tried to adapt it to a Dravidian substructure. The temple of Virūpāksha at the same place is an excellent example of the pure Dravidian, built about A.D. 740, while close by is another that might have been transferred from Orissa.

On the temple of Kuchchimalligudi at Aihole is a somewhat similar *śikhara*. This temple is small and plain, with a sloping roof over the side aisles, and belongs to about the seventh century. The Meguti temple also at Aihole must have been a fine work, but unfortunately it has lost all above the wall heads.

Among Chālukyan temples a prevalent form is that of three shrines round one central *mandapa* or hall. The arrangement for supporting the roofs of the halls almost always follows the Dravidian mode of four pillars, or multiples of four, in squares; the device of twelve columns so disposed in a square that, omitting the corners, the remaining eight could be connected by lintels to form the octagonal base of a dome, is almost unknown. It is employed, however, in the outer hall of the great temple at Hāngal. In the Dravidian and northern temples the

projections on the walls are generally formed by increments of slight thickness added flatly to their faces, and, however thick, they are so placed as to leave the true corners of the shrines, &c., more or less recessed.

In the Chālukyan temples the corners are often made prominent by increments placed over them, or the whole plan is star-shaped, the projecting angles having equal adjacent faces lying in a circle, as in the temple of Belūr in Mysore, built about A.D. 1120; in that at Somnāthpur on the Cauvery, thirteen miles east from Mysore city, finished in A.D. 1270; in that of Kaitabheśvara at Halebīd—lately the gem of Chālukyan art, now, alas! a shapeless ruin; and in a modified form in that of Galteśvara in Gujarāt. The great temple of Hoysaleśvara at Halebīd, begun about A.D. 1250, was left unfinished at the Muhammadan conquest. It is a double temple, measuring 160 ft. by 122 ft., and is covered with an amazing amount of the richest sculpture. But the spires were never raised over the shrines. The Kedāreśvara temple at Balagāmi is perhaps one of the oldest of the style in Mysore, and there are other good examples at Kubattur, Harnhalli, Arsikere, Kōravangala, and elsewhere—surveys of none of which have been published. But the plans vary greatly. The *śikhara* did not preserve the southern storeyed form but was rather stepped, forming a square pyramid with breaks corresponding to the angles in the walls, and with a broad band answering to the larger face in the middle of each exposed side of the shrine.

Some of the details of this style are very elaborate: in fact, most of the finer temples were completely overlaid with sculptural ornament. The pillars are markedly different from the earlier Dravidian forms; they are massive, richly carved, often circular and highly polished. Their capitals are usually spread out, with a number of circular mouldings immediately below; and under these is a square block, while the middle section of the shaft is richly carved with mouldings in the round. In many cases the capitals and circular mouldings have been actually turned in a sort of lathe, the shaft being held in a vertical position. They are almost always in pairs of the same design, the whole effect being singularly varied and elegant.

As we see at Ajantā and elsewhere, doorways were, from a very early period, objects on which much artistic skill was lavished; and this taste was maintained in the utmost elaboration bestowed on the sculptures surrounding the doors of Dravidian and Chālukyan shrines. Pierced stone windows were employed in Dravidian temples at Pattadkal, Ellora, and other

places; but the richly carved and highly ornamented pierced windows belong specially to this style. Generally the temples stand on a terrace from 10 to 15 ft. wide, quite surrounding them, and from 3 to 6 ft. in height—a feature which adds considerably to the architectural effect. The buildings were erected without mortar, and, in the earlier examples at least, the joints were carefully fitted. The whole was covered with sculpture, often of geometric and floral patterns, intermixed with numerous mythological figures; and, in the later examples, the courses of the base were carved with the succession of animal patterns prescribed for them in the *Śilpa Śāstras*. This is very fully exemplified in the great temple of Hoysaleśvara at Halebīd. This temple, though unfinished, is one of the most remarkable in India, and, in an artistic sense, is unmatched in the variety of its details and the wild exuberance of fancy displayed in its ornamentation; while the combination of horizontal with strongly-marked vertical lines and the play of outline and of light and shade are hardly surpassed in any style.

Owing to our still imperfect knowledge of the antiquities in the Hyderābād territory, we can as yet refer only to a few, such as the Hanamkonda temple near Warangal, one at Buchanapalli to the west of Hyderābād, and others at Ittagi in the south-west, at Nilanga, Nārāyanpur, &c., though we know there are many other ruins all over the area that belong to this style. In the south of the Bombay Presidency we may instance those at Dambal, Rattihalli, Tiliwalli, and the large temple at Hāngal; in the Bellary District of Madras, at Magala, Kuruvatti, Nīlagunda, &c.; and in Mysore those at Belūr, Somnāthpur, Halebīd, Balagāmi, Kōravangala, Harihar, and others.

Indo-Aryan Style of Architecture

Of Northern India, or that area which is usually designated as Hindustān, lying to the north of the Tāpti and the Mahānadī rivers, the Hindu architectural style or styles, besides being more widely spread than either of the preceding, is also more varied and wanting in marked and characteristic individuality. Mr. Fergusson, whose nomenclature has necessarily become impressed upon Indian archaeology, has applied the term Indo-Aryan to the Hindu style prevailing over this area; and it would be difficult to find a better, since this type of architecture was 'invented and used in a country which Aryans once occupied, and in which they have left a strong impress of their superior mental power and civilization.'

Within this large area there are, of course, many examples of other styles, whilst south of it there are also buildings belonging to this more northern type. At Pattadkal, for example, the temple of Pāpanātha, as already noticed, has a *śikhara* belonging to this Indo-Aryan style; whilst at the same place is another temple of the early northern class, as are also the temples of Kuchchimalligudi at Aihole, the smaller temple at Hāngal, and others in the northern Kanarese districts. This sporadic appearance of temples of a style removed from their proper area may be accounted for in various ways: great temples were constantly being visited by pilgrims on their way from one shrine to another, and the repute of any new fane was soon spread over all India; and thus, when a prince undertook to build a new temple, an architect (*sthapati*) of acknowledged ability might occasionally be sent for from the most distant province, and engaged to design the work, which, of course, would be in his own style. This, too, may possibly account for the mixture of styles we find in some temples.

But under this Indo-Aryan style are classified monuments of very various orders, and we might, if necessary, separate them into two or more distinct types. The characteristic that first appeals to our notice is the curvilinear spires of the temples, and next to this the absence of that exuberance of sculpture seen in the great Chālukyan temples of the South; while in many cases, as in the Jain temples, a greater central area has been obtained by arranging twelve columns so as to support a dome on an octagonal disposition of lintels. The shrines and *mandapas* are square, and only slightly modified by additions to the walls of parallel projections, which, in the earlier examples, were thin; the walls were raised on a moulded plinth (*piṭha*) of some height, over which was a deep base, the two together rising, roughly, to about half the height of the walls. Over this is the panelled face of the wall, usually of less proportionate height than in the Chālukyan style, and though devoted to figure sculptures in compartments, the tall, thin pilasters of the southern style have disappeared. Over this is the many-membered architrave and cornice, above which rise the spire and roof. The spires follow the vertical lines of the wall, and present no trace of division into storeys, but vary in details with the age. In the earlier, we have a broad band in the centre of each face, running up and curved inwards towards the summit, which was crowned by a large, fluted, circular block called *amalaśilā*—probably mistaken for *āmalaka* (*Phyllanthus Emblica*),—the

word *amala* meaning 'pure,' 'shining.' The finial over this is the shape of a vase, known as the *kalaśa* or *karaka*. The central band on the *śikhara* was carved, usually with a reticulated pattern composed of minute arches, but occasionally interrupted by bands of larger ornament, as at Kanārak in Orissa, and on some of the Bhubaneswar temples. The corners of these spires were generally in courses, also carved in successive patterns, each third or fourth course being alike, and one of these was usually fluted if not also circular like the *āmalaka*.

What is known as the Jain style of architecture in Western India is a development or variety of this Indo-Aryan order, and was used by Hindus and Jains alike all over Rājputāna, Mālwā, and Gujarāt. It was employed in its most ornate form by the Jains in their famous marble temples on Mount Abu, and by both Jains and Hindus at Nāgdā near Udaipur, where is a group of little-known but remarkably fine deserted temples. At Girnār also and Śatrunjaya in Gujarāt are clusters of temples of this order; but as they are mostly restorations of earlier shrines destroyed by the Muhammadans, they are much less lavishly ornamented with sculpture. One of the most striking features of the style is the richly carved domes over their *mandapas* or porches. Nothing can exceed the elaboration and delicacy of details in the sculptured vaults of the temples at Abu and Nāgdā. These, with the diversified arrangement of variously spaced and highly ornamented pillars supporting them, produce a most pleasing impression of symmetry and beauty.

The plain of north Gujarāt was so often devastated by war from the eleventh to the fifteenth century that its more notable temples have perished, though the once magnificent Sun temple at Mudherā still witnesses in its ruins to the architectural style and grandeur of the period when it was erected. What fragments still survive there have been illustrated in the volume of the *Archaeological Survey* of that district.

Another considerable group of from thirty to forty temples in this style is found also at Khajurāho in Bundelkhand. In the early part of the last century they were much more numerous than now—many having been removed for building material. They belong to both the sects of Hinduism as well as to the Jains, and date mostly from the tenth and eleventh centuries. The older temples are covered outside and inside with the most elaborate sculptures, and architecturally they may justly be regarded as 'the most beautiful in form as well

as the most elegant in detail' of the temples of Northern India; indeed, the only others that can well be compared with them is the earlier group at Bhubaneswar in Orissa.

The temples at Bhubaneswar exhibit the Indo-Aryan style perhaps in its greatest purity, and they differ very markedly from those in the West in being almost entirely astylar—pillars having been introduced in later additions. They have the early form of *śikhara*—nearly perpendicular below, but curving in near the summit; and the crowning member has no resemblance to anything like the small domes on Chālukyan spires. The surface of the sides is entirely covered with carving in the most elaborate style, every single stone having a pattern engraved upon it; and much of the sculpture on the earlier temples is of considerable merit and much beauty of design. The older and finer ones were erected probably in the seventh and eighth centuries, and the series was continued, by additions, down to the eleventh. From the light they seem calculated to throw on the history of art, no temples in India probably would better repay a complete scientific survey, and an attempt was made in 1869 to supply this want, but the result was an unfortunate failure. The drawings made were mostly of mere details, chosen without sequence or meaning; and no plans of any of them were prepared until a second effort was made three years later, when some ground-plans on a small scale and of doubtful accuracy of detail were drawn and printed together, on two plates in the second volume of the *Antiquities of Orissa*.

The temple of Kānārak, known as the Black Pagoda, on the coast of Orissa, appears to belong architecturally to the ninth century, though it has been by some attributed to the reign of Narasimha in the thirteenth—possibly because he repaired it or made some addition. A detached *mandapa* that stood in front of it, occupying a corresponding place to that at Mudherā, was removed to Purī, in the eighteenth century, by the Marāthās. A corner of the *śikhara* was still standing in 1839, but within the next thirty years had disappeared; and the great lintel over the entrance to the principal hall, carved with the *Navagraha* or nine planetary divinities, with other parts about the doorway, had fallen or were removed, and an abortive attempt was made to carry the lintel to Calcutta. Now this famous monument, which for its size is 'the most richly ornamented building—externally at least—in the whole world,' has lately been treated in a way that has very seriously injured it. The historical and artistic interest of it and of the

two groups previously noticed cannot be fully estimated until complete surveys have been published with detailed plans and sections.

In later examples the spire is still a square curvilinear pyramid, to the faces of which are added smaller copies of the same form, carrying up the offsets of the walls; and in some examples these are multiplied to an extraordinary extent. The earlier temples were apparently astylar, then—like the southern forms—with columns arranged in the *mandapas* in groups of four, and later, especially in Western India, the larger domes on twelve pillars formed the central area of the halls. These *mandapas* in early examples were roofed with long, sloping slabs; but, to provide for carved conical roofs inside, their outer forms represented courses of masonry, which were carved,—as we find in the older temples of Kanārak and Bhubaneswar, in the mediaeval shrines at Aṃbarnāth, Baroli, Khajurāho, Abu, and Chitor, and in the more recent forms at Nāsik, Benares, Udaipur, Śatrunjaya, &c.

Muhammadan Architecture

What is popularly known as Saracenic architecture is the style which was adopted by the Muhammadans when they became the ruling race in India, from about the end of the twelfth century. But while largely applied to mosques and tombs, it varied much at different periods and under the various local Muslim dynasties in different parts of the country. The Delhi emperors, for the first three centuries of their domination, were of Turkī or Pathān stock, and were succeeded in the early part of the sixteenth century by the Mughal dynasty founded by Bābar, when the latter materially influenced the architectural style of the previous dynasty.

Then there were local kingdoms which had styles more or less their own: Bengal became a separate kingdom at the beginning of the thirteenth century; the Bahmani dynasty at Gulbarga and Bīdar dates from the middle of the fourteenth century; the kingdoms of Jaunpur, Gujarāt, and Mālwā from about A.D. 1400; Bijāpur and Ahmadnagar from about 1490, and Golconda from some twenty-two years later. Exclusive of other varieties of less extent and individually not so distinctly marked off, we have thus some ten more or less fairly different styles of Saracenic structures.

In a . the varieties, the distinctive features of each may be -aced it once to the employment of local native Hindu

workmen, and the use of their own materials and methods. The conquerors were of Turkish descent, and apparently had strong architectural instincts; accordingly they began at once to found mosques for the glory of Islām and to mark their triumph over the idolaters.

Their first mosques were accordingly constructed of the materials of Hindu and Jain temples, and sometimes with comparatively slight alterations. The colonnade of a temple court required little more than a wall on the west side fitted with *mihrābs* or *kiblas*, and the removal of the idol shrine, to adapt it for a mosque. In other instances they demolished the temples, and, by adding to the height of the columns, obtained the greater elevation and airiness they required. Thus in the great mosque at Ajmer, erected between 1200 and 1230, three tiers of pillars are piled above one another, and the roof is largely formed of slabs from the temples to which the columns originally belonged: in plan it is an adaptation of that of a Jain temple. And in the still larger mosque at the Kutb Minār near Delhi, built about the same time—so far as it remains—we have the same features; while in both a richly carved screen of pointed arches was added in front, and the whole enclosed by massive walls. The arches, which the Muhammadans seem to have insisted on, are built after the system of the Hindu domes, of horizontal courses as far as practicable, and then closed by long slabs meeting at the apex—an evidence that the workmen, being Hindus, were unused to building arches and modified their own methods to meet the new form of construction. The arches are circular segments up to about two-thirds of their height, and constructed in horizontal courses. Above come one or two half voussoirs, and the head is closed in by sloping slabs.

The Kutb Minār itself is one of the finest pillars in the world. Erected by order of Altamsh (not by Kutb-ud-dīn Aibak), it was probably completed about A.D. 1231, which is the date of an inscription on the adjoining mosque. It is still about 240 ft. in height and ornamented by four projecting balconies with richly sculptured and engraved belts between, and the whole of the lower three storeys are cut up by twenty-four projecting ribs that add greatly to its beauty. Behind the north-west extremity of the Kutb mosque is the tomb of Altamsh, who died in 1236; it is thus perhaps the earliest Musalmān tomb to be found in India, and is profusely ornamented with carving, and altogether of extreme beauty

in its details. A still finer example of the Pathān style is to be seen in the eastern annex of the mosque—the splendid southern gateway or Alai Darwāza, built in 1310: this and the now ruined tomb of 'Alā-ud-dīn Khilji, erected soon after, mark the style at the period of its greatest perfection: indeed during his reign (1296–1316), and that of Fīroz Shāh Tughlak (1351–88), palaces, forts, mosques, mausoleums, baths, universities, and all sorts of public and private buildings multiplied in an extraordinary manner. But after the death of the former, for fully a century, the Pathān buildings are marked by a stern simplicity of design and a solemn gloom and nakedness, in marked contrast to the elaborate richness of ornamentation of the preceding period. In 1321 New Delhi or Tughlakābād was founded by Ghiyās-ud-dīn Tughlak I, all the buildings of which are characterized by a severe simplicity, as contrasted with those of the preceding century. The sloping walls and massive solidity of the founder's tomb, together with the heavy towers of the fortified citadel surrounding it, form an unrivalled model of a warrior's tomb.

But by this time the builders had got rid of the imitation arch of the Hindus, and had learnt to construct true arches, and their architecture had now developed into a new and complete style of its own. To this style belong many of the finest mausoleums of Northern India. Like that of Sher Shāh Sūri (1540–1545), built in a spacious tank at Sasarām, which is one of the best examples, they are very often octagonal, with an outer veranda and crowned by a dome over the inner walls, and the whole surrounded by a square terrace ornamented by small pavilions at the corners. Round the drum of the domes, also, are placed octagonal kiosks that accentuate the beauty of the outline. Other examples are numerous, among which that of 'Alā-ud-dīn Ālam Shāh at Tijāra in Alwar territory, and of Mubārak Shāh (1540-45) at Kotila near Old Delhi, may be instanced.

The Pathān mosques of the fourteenth century were as severe in the simplicity of their style as their tombs, as we may see in the Kalān mosque at Delhi, finished in the time of Fīroz Shāh in 1386. In the first quarter of the fifteenth century, however, a reaction had set in, and the later style was hardly less rich and much more appropriate for its purposes than the earlier in the end of the twelfth and early thirteenth century. The façades of the mosques became more ornamental, were often encrusted with marble, and usually adorned with rich and beautiful sculpture. Minarets had

not become a feature of the mosques, and the corners of the structure were relieved by little kiosks instead. At Ahmadābād, minarets came into use for the *mu'azzin* in the fifteenth century. The body of the mosque became generally an oblong hall, with a central dome flanked by two or four others of the same span, but not so lofty, and separated from it by an arch whose mouldings formed a principal feature of the building. The pendentives are remarkable for their variety of design and elaborateness of detail. The style in the later Pathān period, as Mr. Fergusson has remarked, was marked by a return to the elaborateness of the past, but with every detail fitted to its place and its purpose, 'and we recognize in this last development one of the completest architectural styles of the world.'

The Sharkī Style

In 1397 Khwāja Jahān, who governed Jaunpur, assumed independence, and founded the Sharkī or Eastern dynasty, which ruled there for about eighty years. Of the palaces or public buildings of the Sharkī dynasty no trace is left; for Sikandar Lodī ibn Bahlol razed them all to the ground, his courtiers using the materials for building their own mansions, and what has come down to us is little more than three great *masjids*—the Jāmi, Atala, and Lāl Darwāza—besides a fort and bridge with a number of tombs. Of these mosques the cloisters that surround the open courts and the galleries within are almost purely Hindu in style, with short square pillars and bracket capitals supporting horizontal lintels, and roofs formed of flat slabs; but the gateways and principal features of the *masjids* are in a completely arched style. There is sufficient evidence that, for the earlier of these at least, the materials of Hindu temples were largely used, and the workmen were probably mostly Hindus by birth and inclined to the old trabeate forms. The fusion of the two styles was thus incomplete. The *masjid* proper consists of a central square hall covered by a lofty dome of the whole width of it, in front of which stands the great propylon, of massive outline and rising to the full height of the central dome. This propylon had a large recessed arch between the two piers at the sides, in the lower portion of which was the entrance to the mosque, whilst the upper formed a pierced screen. On each side of the dome is a compartment divided into two storeys by a stone floor supported on pillars, and beyond this, on each side, is a larger apartment covered

by a pointed ribbed vault. The gateways into the courts on the three sides were only copies on a smaller scale of the propylons of the mosques.

The whole of the ornamental work on these mosques has a character of its own, bold and striking rather than minute and delicate, though in some of the roof-panels there are designs that may bear comparison with similar patterns in Hindu and Jain shrines. The *mihrābs* are marked by their severe simplicity; they are simply patterns of the entrances and of the niches on the outer walls, with flat backs and structural arches over them. They form a link, however, in the evolution of the favourite form under the Mughal rule.

The Sharkī buildings have been pretty fully illustrated in the volume of the *Archaeological Reports* on the subject, and need not be further described here. They afford a marked expression of strength combined with a degree of refinement that is rare in other styles. Examples of this style are met with also at Benares, Kanauj, and other places within the Jaunpur kingdom.

Mālwā

Dilāwar Khān Ghorī, the governor of Mālwā, assumed independence in 1401, and the state continued under its own rulers till 1531, when it was conquered by Gujarāt, and was finally re-annexed to imperial rule under Akbar in 1570. The capital of the province had been first at Dhār; but Dilāwar Shāh resided a good deal at Māndu or Māndogarh, about 22 miles south from Dhār, placed on an elevated plateau detached from the mainland by deep ravines and surrounded by walls on the brink of the cliffs; and under the second king, Hoshang Shāh, Māndu became the permanent capital. During his reign (1405–34) the most important of the buildings were erected. Among these, which are in a modified form of the Pathān style, the finest is the great Jāmi Masjid, which was only finished by Mahmūd Shāh I in 1454. It covers a nearly square area, measuring 290 ft. from east to west by 275 ft. from north to south, exclusive of the porch on the east, which projects about 56 ft. Inside, the court is an almost exact square, about 163 ft. each way, surrounded by arches on each side of about 12½ ft. in span, standing on plain square piers 10 ft. high, each of a single block of red sandstone; behind these are triple arcades on the north and south, a double one on the east, and on the west the *masjid*—five arcades in depth, and having three great domes

on the west side. This court, in its simple grandeur and expression of power, may be taken, as Mr. Fergusson has well remarked, as one of the very best specimens of this style now to be found in India.

The tomb of Hoshang Shāh, adjoining the west side of the Jāmi Masjid, is a fine bold specimen of a Pathān mausoleum. It was revetted both outside and inside with white marble, which, however, has much peeled off, and is now being restored. Near the mosque, on the west, is a splendid hall, 230 ft. in length by 28 ft. wide, supported by eighty-four pillars, in three rows, of which the pattern must have been suggested by the usual forms in Hindu and Jain shrines; only on the capitals the *kīrttimukh* or horned face of the Hindus has been hewn into a group of leaves of the same outline. The porch on the north side of it is purely Hindu in style.

The Delhi gate on the north of the fortifications, by which they are entered, has been a fine lofty structure, though now much ruined: it also is purely Pathān in style, but unusually elegant in proportions and decoration. Close by this gateway are the remains of an enclosure, within which are the ruins of the royal palaces—the Jahāz Mahal, the Hindola Mahal, the Tawilī Mahal, and the Nahār Jharokhā, with the Champā well or *baoli*, &c. The palaces are specially interesting as remaining examples of Pathān secular architecture, though, unfortunately, no proper survey of them has as yet been published, and it is hardly possible from such sketches as have from time to time appeared to form a just estimate of them or their arrangements.

The Jahāz Mahal, the 'ship' or 'water-palace,' built between two great tanks, is the chief of these. It is a massive structure, the eastern façade being about 40 feet in height, in the centre of which is the arched entrance, faced with marble, and still in fair preservation; over it is a projecting cornice supported on brackets, above which is a bracketed balcony under an oblong pavilion. In the front of the lower storey on each side are five arches under a deep overhanging cornice, and over each end of the façade is a domed pavilion. On one side is a ruined wing of the palace branching off from it; and on the opposite side were other apartments and a stair leading up to the roof. Seen from the west, where it overhangs the lake, this is altogether a striking building, one of the most remarkable of the period, and well worthy to be the residence of an independent Pathān chief.

North of this, about a quarter of a mile, stands the Hindola

Palace, which, with its massive masonry, is in rather better preservation than the others. The sloping buttressed walls, projecting balconies, and deep-set windows of this fine building present an appearance of great strength; and the great hall within, 108 ft. in length by 22 ft. wide, its roof supported on arches, was a splendid apartment. To the north of this were the zanāna apartments: and at some distance to the west are the large underground cisterns and *tah-khānas*, or hot-season retreats, of the Champā well or *baoli*. These indicate the care and taste bestowed on such appendages of a Muhammadan palace 500 years ago.

The Nahār Jharokhā Palace is to the north of the Hindola Mahal, and also within the walled enclosure; and outside is Dilāwar Khān Ghori's mosque, the oldest in Māndu (1405), constructed of materials taken from Hindu or Jain shrines. It has, however, a simplicity of structure about it characterizing it as a typical Pathān work.

About eighty yards to the south of the Jahāz Mahal is the Tawilī Mahal, a three-storeyed building, with its rows of lofty Saracenic arches below deep stone eaves and heavy windowless upper storeys. It lies across a beautiful foreground of water and ruins.

About a mile and a quarter south of the Jāmi Masjid, on the east of a great *talāv* or lake, is a group of buildings among which is the so-called Dhāī-ka Mahal, a substantial square tomb, and the Chhotā Jāmi Masjid of Malik Mughīs-ud-dīn, built in 1432 largely with materials taken from Hindu or Jain shrines, as the pillars in the porch and colonnade bear witness. This mosque must have been one of great beauty and interest, its entrance porch, though in ruins, being still an elegant structure. Opposite to it is the ruin of Malik Mughīs-ud-dīn's palace, and also, a little farther off, his tomb, the dome still enlivened by a belt of blue enamel.

Still more to the south are the remains of the palace of Bāz Bahādur, the last king of Mālwā,—which was built apparently by Sultān Nāsir-ud-dīn Khiljī in 1509, and of which some portions of the courtyards remain intact, as well as the cupolas over the colonnades. On the hill above is what is now known as Rūpmatī's *chhatri*, still in fair preservation.

Here, as elsewhere, the available materials have exercised a marked influence upon the architecture; the prevalence of a red sandstone is emphasized in the piers of the Jāmi Masjid —more than 300 of them being each of a single block of this material; and for more decorative purposes marble, both

white and coloured, was freely used to revet the walls and piers. An adequate survey of the remains at Māndu, and of a few others of the same age in Mālwā, would form an interesting monograph on this style of architecture, together with its constructional methods, which deserve attention and study. We have here a strictly arcuate style, without admixture of the general trabeate structural methods followed by the native Hindus; and while at Jaunpur and Ahmadābād, at the same period, we find the strong influence of native methods copied in the Muhammadan architecture, at Māndu the borrowing or imitating of such forms seems to have been suppressed, and the builders clung steadily to the pointed arch style, without any attempt, however, at groining—so successfully employed at a later period by the Mughal architects.

Bengal

The Bengal province was placed under governors appointed from Delhi as early as A.D. 1194, the first of these being Muhammad-i-Bakhtyār, under the emperor Kutb-ud-dīn Aibak. In 1282 Nāsir-ud-dīn Bughra Khān, the son of the emperor Ghiyās-ud-dīn Balban, was appointed governor and the office became hereditary in his family. In 1338 Fakhr-ud-dīn Mubārak slew the governor Kādir Khān and assumed sovereignty, but was successfully opposed by 'Alī Mubārak, who reigned from 1340 to 1346. He was assassinated by Shams-ud-dīn Ilyās Shāh, who then defeated Ikhtiyār-ud-dīn Ghāzī Shāh in 1352, and may be regarded as the founder of the Purbīya dynasty, which ruled Bengal for about a century and a half, or till 1487, when the throne was usurped by Habshīs and subsequently by 'Alā-ud-dīn Husain Shāh III. But in the reign of his son, Mahmūd Shāh III, Sher Khān, the Afghān ruler of Bihār, invaded Bengal in 1537 and laid siege to Gaur, which was then completely sacked, and this once great and wealthy city, thus plundered, began to decay and its buildings were neglected. The kingdom was annexed by the great Akbar in 1573, and the city was depopulated by plague in 1575.

But long before the advent of the Muhammadans, Gaur, or Lakhnautī, had been the capital of the Pāl dynasty in the ninth and tenth centuries and of the Sens of Bengal in the twelfth century; it was then of great extent, and doubtless contained many temples and palaces that were destroyed by the Muslims. As the country is practically without stone, they would be mostly of brick and would afford material for the conquerors;

but probably pillars, images, and details were of that hornblende, basalt, or hard potstone, which takes a high polish and is employed in the later structures. In the Eklākhi mosque or tomb (A.D. 1414) at Pandua, and in the Chhoti Sonā Masjid at Gaur (circ. 1500), the stones used have largely been taken from earlier Hindu buildings. The use of brick forced the builders to elaborate a local arched style of their own, and further, as Mr. Fergusson pointed out, to introduce a new mode of roofing, which, though but little agreeable to our tastes, came to be regarded by the natives, whether Hindu or Muhammadan, as a most elegant form, and spread, in the seventeenth century, as far up the Gangetic valley as Delhi, and a little later, even to Amritsar. The curvilinear form given to the eaves, descending at the corners of the structure, was almost certainly suggested by the form of the huts, constantly roofed with bamboo and thatch, in which the Bengalis always use a curvilinear form of roof.

The erection of large buildings of brick required heavy piers for the arches and thicker walls than those constructed entirely of stone. Such piers and walls, when enriched by a casing of moulded tiles, would appear still heavier; and for tiles, when opportunity offered, a facing of carved stone might be substituted. This was doubtless the kind of buildings before the Muhammadan conquest, and the style was only modified by that event; hence this Bengal style is not like any other, but a purely local one, with heavy short pillars faced, at least, with stone, supporting pointed arches and vaults of brick.

Ilyās Shāh (1345) made Pandua, to the north of Gaur in Mālda District, his capital, and there his son and successor, Sikandar Shāh (1358–89) built the great Adīna Masjid within the first ten years of his reign. It measures nearly 500 ft. in length by 285 ft. from east to west, containing in the centre a court measuring nearly 400 ft. by 154 ft., surrounded by a thick curtain wall of brick, pierced by eighty-nine arched openings, with one on the west side much wider and more dignified than the others. The roof was supported by 266 stone pillars—the cloisters on three sides had a double row of pillars in each—that on the west, or the mosque proper, having four rows of pillars and thirty-five *mihrābs* on the west wall. The pillars are about 2 ft. square at the base and 10 ft. 5 in. high, some consisting of one block of hornblende, but wanting in variety of pattern. North of the central *mihrāb* is a platform known as the Bādshāh-ka takht, that is, the *mulūk khāna*, or

royal gallery. This is supported by twenty-one short pillars of a much heavier form, and has others of a better type above. The roof consisted of 378 domes, all of the same form and construction. Such a design has little architectural merit, though its size and the elegant richness of its details make it an interesting study; and the same character runs through most of the works of these Purbīya rulers.

Next to the Adīna Masjid comes the Eklākhi mosque or tomb, at a distance of about two miles to the south-west. It is said to be the tomb of Ghiyās-ud-dīn Azim Shāh (1390–7), but there is no inscription to show this, and it may have been the work of Jalāl-ud-dīn Muhammad Shāh (1414–43), who was a great builder. It is 80 ft. square and covered by one dome. Much of the materials have been taken from Hindu temples, the structure being built of hornblende slabs and brick, with much embossed brick used in the decoration. It has richly carved buttresses at the corners, reminding one of the bases of minarets, but they had only a capstone above the level of the roof, the corners of which curve downwards on each face. Though much smaller, this was altogether a bolder and architecturally finer structure than the Adīna Masjid.

To the south-west of the preceding is the Sōnā Masjid, a small but once elegant mosque, built of hornblende or, perhaps, basalt. It has five arched doorways, and was roofed by fifteen brick domes, but the trees that were allowed to take root in them have wrought its destruction.

Five miles south of Pandua is Mālda, where also are remains of mosques, tombs, and gateways belonging to the times of the Purbīya rulers.

Among the ruins of the once great city of Gaur, six miles south-east of Mālda, are more interesting remains, of the same style and period. Of these may be instanced the Dākhil or Salāmī gateway, the north entrance into the fort, supposed to have been built by Rukn-ud-dīn Bārbak Shāh (1460–74)—as grand a structure of the kind as is to be found anywhere. It is built of small bricks, decorated with embossed terra-cotta facings, is 70 ft. across the façade, with a depth of 110 ft., having rooms for the guard on each side the passage and lofty towers at the corners, whilst a recessed arch 34 ft. high encloses the entrance on each face.

Just outside the fort to the east is a *minār*, about 85 ft. in height and 21 ft. in diameter, which, for two-thirds of its height, is a polygon of twelve sides, and above that contracts and is

circular. Probably a platform some 15 ft. in height once surrounded the base, but it has entirely disappeared, and the door is now at a considerable height from the ground. Inside, a spiral stair leads to the small chamber on the summit, once roofed by a dome. At one time this tower was encompassed by a revetting of stone, and the cupola was covered with blue and white tiling, but now these are entirely gone. Indeed, most of the tiles with which the mosques and tombs at Gaur and Pandua were originally ornamented have long since disappeared, for (as mentioned in Grant's *Fifth Report*, p. 285) the *Nizāmat daftar* contained an entry of 8,000 rupees under the head of *kīmat khishtkār*, annually levied from a few land-holders who had the exclusive right of 'dismantling the venerable remains of the ancient city of Gaur or Lakhnautī, and conveying from thence a particular species of enamelled bricks, surpassing in composition the imitative skill of the present race of native inhabitants.'

This *minār* Mr. Fergusson regarded as a Jayastambha or pillar of victory, comparing it with the Kutb Minār at Delhi, that raised by Ghiyās-ud-dīn Balban at Koil in 1253, and one at Daulatābād with a high marble platform round it. This was erected by Saif-ud-dīn Fīroz Shāh II (1488–90); and it may be remembered that about 1443 Mahmūd Khiljī, after his victory over the Rājputs at Kumbhalmīr, erected a tower of victory at Māndu faced with marble; and again on Rānā Kūmbha gaining a victory over Mahmūd he erected the fine Kīrtti-stambha at Chitor, 1448–58.

Among the mosques at Gaur the Kadam Rasūl Masjid at the south-east gate of the fort is the only one at all cared for, because it contains a stone bearing the supposed impression of Muhammad's footprint, brought from Madīna by Husain Shāh (1493–1519). The mosque was built by his son Nusrat Shāh, A.D. 1530. It has three arched entrances in the front, separated by massive piers, and is about 35 ft. in length inside; the central portion of the roof is covered by a single dome, and it had four minarets at the corners, the upper portions of stone, of which only one survived into the last century. The façade is relieved by horizontal mouldings and panels of moulded brick, and string-courses of the same extend its whole length.

South from this is the half-fallen Tāntipāra mosque, which must have been a building of considerable architectural merit. The *mihrābs* are elegantly carved, the roof was supported by massive stone pillars, and the façade richly

decorated with ornamental terra-cotta facing. It is ascribed with probability to Yūsuf Shāh, about A.D. 1480.

Southwards from this again is the Lattan or 'painted mosque,' so called from its walls being cased inside and out with glazed tiles of different colours—dark blue, green, yellow, and white, admirably arranged for effect in varied patterns. The exterior has been much defaced, but inside, if still in fair preservation, it is fast going to decay. It has four entrances in each end as well as in front; and eight double buttresses relieve the exterior by their mouldings and encrusted tile decoration. It is also ascribed to the reign of Yūsuf Shāh in 1475.

The Kotwālī Darwāza is a handsome and imposing gateway of brick, leading from the south side of the old city, and, except above, is in pretty good preservation. To the apex of the arch is 31 ft., the depth is 51 ft., and on the south it was provided with semicircular abutments on each side for the military guard.

About two miles farther south is the Khwāja-kī Masjid, known as the Chhoti Sonā Masjid, built by Walī Muhammad during the reign of Husain Shāh, that is, in the beginning of the sixteenth century. Constructed entirely of hornblende, which has been largely taken from earlier Hindu temples, it is in fairly good preservation—better than any other in Gaur. Inside it is divided lengthwise into three aisles, and five across, the arches over which rise on somewhat massive stone pillars to a height of 20 ft., and above this are the fifteen domes. The five *mihrābs* are of black hornblende, and were once gilt; while in the north-west corner is a carved *takht* or throne. It is ornamented outside by carving in low relief, of most elaborate and artistic designs, and inside it is beautifully finished. In this mosque and the next we have the style probably at its best.

The Sonā Masjid, outside the fort to the north-east, is perhaps the finest memorial left at Gaur. Built by Nusrat Shāh in 1526, it was 170 ft. in length by 76 ft. deep, with walls 8 ft. thick, faced inside and out with hornblende. In front it has eleven arched entrances, 8½ ft. wide and 14 ft. high. These lead into a corridor, the arches of which support the twelve domes of its roof. Within this is the *masjid*, of which the whole roof has now fallen: it had three aisles in length, supported by twenty pillars, and had eleven *mihrābs* in the west wall. At both sides of the end doorways to the corridor and at the back corners were

polygonal *minārs* of brown basalt, but how far they rose above the walls is uncertain. The front had carved panels between the doorways and mouldings above them. From its massive solidity and size this must have been an imposing building. Indeed, this characteristic of the Gaur buildings stands out in striking contrast to the somewhat slight architectural arcades of much of the Saracenic architecture.

Perhaps nowhere else, even in India, is the effect of unchecked luxuriant vegetation upon the most substantial structures to be seen in a more striking and withal melancholy scale than in the vast mass of ruins that run almost continuously for more than twenty miles from Pandua to Madhāpur. But besides these remains, there are other examples of this style scattered over the area of what was the Bengal kingdom of the fourteenth and fifteenth centuries. And the style was continued by the natives, whether Hindu or Muhammadan, and employed with excellent effect in temples of later date, as in that of Kānta at Kāntanagar near Dinājpur, erected 1704–22, or in the now-ruined one of Rās Mohan at Gopālganj near the same place, built in 1754; the latter has twelve sides, but is cramped in plan, which is sacrificed to excessive ornament.

Gulbarga and Bīdar

The Bahmani dynasty, founded by Hasan Gangū Bahmani in 1347, had Gulbarga for its capital till about 1428, when it was transferred to Bīdar, a little over sixty miles to the north-east. This kingdom stretched from Berār to the Kistna river and from the Telingāna or Warangal territories on the east to the Arabian Sea on the west, and in the latter half of the fifteenth century it included all the Western Deccan from Mysore to Gujarāt.

During the eighty years (1347–1428) that Gulbarga was the capital, it was adorned with important buildings, of which the most notable now remaining is the great mosque, one of the most striking in India. It measures over all 216 ft. from east to west by 176 ft. from north to south, 45 ft. on the west being occupied by the *masjid* proper. It differs from all the great mosques in India in having the whole central area covered over—as in the great mosque at Cordova—what in others would be an open court of about 126 ft. by 100 ft., being roofed by sixty-three small domes. The light is admitted through the side-walls, which are pierced by great arches on all sides except the west. This plan protects the wor-

shippers from the heat and glare of the Indian sun. The central area of the *masjid* is covered by a dome about 40 ft. in diameter, raised on a clerestory, and the side sections by six small domes each, whilst at each end of the corridors are domes of the width of 25 ft. The style is plain and substantial, with but little ornament, and it is built wholly of original materials.

In the east of the town are the tombs of the Bahmani kings—massive square-domed structures with handsome stone tracery on their outer walls, and elaborately finished inside; they are now used as State offices. Farther out is the shrine of Banda Nawāz, built about 1640, and other *dargāhs* are close by.

On the removal of the capital to Bīdar, mosques, palaces, and *dargāhs* were erected there also, of which most have perished. In the citadel the most entire, perhaps, is the mosque, which is 295 ft. in length by 77 ft. deep, with nineteen arched entrances in front, and inside eighty round piers, each 4¼ ft. in diameter, which support the groins of the roof. In the middle, enclosing the *mihrābs* and a pulpit of three steps, is an apartment 38 ft. square, which is carried up as an octagon a storey above the roof of the mosque, and covered by a large dome. Parts of the roof—which was covered by some eighty-four small domes—have fallen in.

During the reign of Muhammad Shāh II, Khwāja Mahmūd Gilanī (or Gāwān), an old noble, in 1478–9 built a *madrasa* about 180 ft. by 205 ft., with lofty *minārs* at the corners of the east face. This must have been a striking building, three storeys in height, with the towers, if not the whole façade, covered with enamelled tiles. In 1656 the city was taken by Aurangzeb, and the *madrasa* was appropriated as a cavalry barrack, and part of it as a powder magazine, which exploded and wrecked the building.

In 1492 the rule was seized by Kāsim Barīd, who really founded a new dynasty, his son, Amīr Barīd Shāh, assuming the title of king. The *dargāh* of the latter, about half a mile to the west of the city, stands on a large solid platform, and is nearly 57 ft. square, with walls 9 ft. 8 inches thick, rising to a height of 57 ft. from the platform, crowned with a sort of honeysuckle border, and the dome is about 37 ft. in height. The dome is ornamented inside with belts of coloured tiles, and further decorated with interlaced Arabic sentences.

The ten tombs of Bahmani kings, about five miles north-east from the city, are of the like pattern and of considerable

splendour, the largest being that of Ahmad Shāh I, who died in 1435. They are not much ornamented, but are structurally good, and impressive by their massive proportions.

Gujarāt

Of the style of Gujarāt Mr. Fergusson has truly remarked, that 'of the various forms which the Saracenic architecture assumed, that of Ahmadābād may probably be considered as the most elegant, as it certainly is the most characteristic of all. No other form is so essentially Indian, and no one tells its tale with the same unmistakable distinctness.' It is the less necessary to enter into detail regarding this style of architecture, since it is one of the very few that have as yet been treated with anything approaching to fullness, in three volumes of the *Archaeological Survey of Western India*.

The Hindu kingdom of Gujarāt had been in a high state of civilization before its subjugation by the Muhammadans, and the remains of their temples at Sidhpur, Pātan, Modherā, and elsewhere testify to the building capacity of the race. Under Muhammadan rule they introduced forms and ornaments into the works they constructed for their rulers, superior in elegance to any the latter knew or could have invented. Hence there arose a style combining all the beauty and finish of the previous native art with a certain magnificence of conception which is deficient in their own works. The elevations of the mosques have usually been studiously arranged with a view to express at once the structural arrangements, and to avoid monotony of outline by the varied elevation of each division. Instead of the propylon of the Sharkī style, the central portion of the facade was raised by a storey over the roof of the wings, and to this was attached two richly carved minarets, rising in the very earliest mosques only as small turrets above the façade, but soon after to towers of considerable height. The central dome was raised over a gallery above the central part of the hall by two rows of dwarf pillars, of which the outer row was connected by open stone trellis-work, admitting a subdued light and providing perfect ventilation. This second storey rose to about the height of the central façade, and upon it was the principal dome.

By and by the style changed much: the arched entrances in front were often omitted, and only a screen of columns formed the façade, the minarets being removed to the corners, and were no longer for the *mu'azzin* but only architectural ornaments. This was partly a return to the Indian trabeate

construction, and it was carried out in its best form in the Sarkhej group of buildings belonging to the second half of the fifteenth century.

The Muhammadan architecture of Gujarāt is notable for its carved stonework; and in the perforated stone windows in Sīdī Saiyid's mosque, the carved niches in the *minārs* of many other mosques, and the sculptured *mihrābs* and domed and panelled roofs, we have ornamental work that will stand comparison with, and much of it will rival, anything of the kind employed elsewhere in any age.

Their tombs were a natural product of the style. There were many brick mausoleums, like that of Daryā Khān and of Āzam and Muazzam Khān, just as there were brick mosques like 'Alif Khān Bhūkāī's at Dholkā; but all the stone tombs were pillared pavilions of varying dimensions, the central area over the grave covered by a dome standing on twelve pillars. These pillars were connected by screens of stone trellis-work carved in ever varying patterns, and round this there might be a veranda with twenty pillars in the periphery, or a double aisle with thirty-two in the outer square. And as these were irregularly spaced in order to allow the inner twelve to support the lintels of a regular octagon for the dome, the monotony of equal spacing was avoided. In larger tombs, as in Saiyid Usmān's, the dome was supported on a dodecagon, and coupled pillars introduced for structural purposes also increased the variety of aspect. The finest example that has come down to us of this class is the tomb of Mubārak Saiyid, erected at Mahmudābād in 1484, which is wholly in the earlier arched style and one of the most splendid sepulchres in India, simple in plan, with a solidity and balance of parts about the whole that has rarely been equalled.

The step-well or *wāv* of Bāī Harīr, though a Muhammadan work, is strictly Hindu in design, and almost a copy of another at Adālaj; but it is ornamented with pillars and galleries having carved wall panels in every way as the mosques are. The sluices, too, of the great artificial tanks are really works of art—designed in suitable forms, and highly ornamental.

Bijāpur

The Musalmān dynasties of the Deccan were short-lived, and about the same time that the Barīd Shāhis supplanted the Bahmanis at Bīdar, the Nizām Shāhis set up as rulers at Ahmadnagar; and in 1492 Yūsuf 'Ādil Shāh, a Turk—said to have been a son of the Ottoman Sultān Murād II—who had

found service under Amīr Barīd, founded the kingdom of Bijāpur. The Berār and Golconda kingdoms arose respectively before and after this; but of their architecture we have as yet no really satisfactory survey. Of Bijāpur we have the excellent accounts by Fergusson, Capt. Hart, and Meadows Taylor (1859 and 1866). It is, therefore, the less necessary to enlarge upon it.

The foreign origin of the 'Ādil Shāhī dynasty, and their partiality for the Shiah form of Islām prevailing in Persia rather than the Sunni, together with their ready employment of Persian officers, probably influenced their architecture, and led to that largeness and grandeur which characterized the Bijāpur style.

About twenty years ago the Bombay Government adapted a number of these old buildings to modern requirements: the Bukhāra Masjid has been used as a post office, and the mosque belonging to Muhammad's great tomb was turned into a travellers' resthouse, but has recently been restored; then the 'Adālat Mahal was converted into the Collector's residence; the Chīni Mahal into public offices; Yāqūt Dabalī's mosque into a residence for the Assistant Collector; Khawāss Khān's *dargāh* and mosque into house and office for the Executive Engineer; the Chhotā Chīnī Mahal into a house for the Police Superintendent; and the 'Arash Mahal into the Civil Surgeon's residence.

The more notable buildings now left at Bijāpur are the Jāmi Masjid, begun by 'Ālī 'Ādil Shāh (1557–79), and his unfinished tomb; the Gagan Mahal (1561); the Mihtar Mahal; the Ibrāhīm *rauza* and mosque (1580–1627); the 'Asar Mahal; and the Gol Gumbaz or great tomb of Muhammad 'Ādil Shāh (1626–56).

The style of the buildings differs markedly from those of Agra and Delhi, but is scarcely, if at all, inferior in originality of design and boldness of execution. There is no trace of Hindu forms or details; the style was their own, and was worked out with striking boldness and marked success. The mode in which the thrusts are provided for in the giant dome of Muhammad's tomb, by the use of massive pendentives, hanging the weight inside, has drawn the admiration of European architects. And this dome, rising to about 175 ft. from the floor, roofs an area 130 ft. square, covering 2,500 sq. ft., larger than the Pantheon at Rome, where stability is secured only by throwing a great mass of masonry on the haunches, and so hiding the external outline.

The plan of the Jāmi Masjid is of the usual form, except

that the east wall and corridor was never built; but, notwithstanding, it is one of the finest mosques in India. It was commenced early in the reign of 'Ālī 'Adil Shāh I (1557–79). The *masjid* proper is about 240 ft. in length by 130 ft. deep, divided longitudinally into five aisles, by nine across; but the centre, occupying a square space of three bays each way, is covered by the great dome, supported in the same way as that over Muhammad 'Ādil Shāh's, rising to a height of about 96 ft. inside, and is the earliest example of this style of dome—being nearly a century earlier than that on the great tomb. The court is about 187 ft. from east to west, and has a corridor on the north and south sides. At the east corners two *minārs* were to be erected, but only that on the north was properly begun. At a later date the court was extended eastwards, and a large gateway constructed about 115 ft. in advance of the original court, with part of a corridor on the south of it.

In the Gagan Mahal, again, the central arch has a span of 61 ft., but the whole structure is ruined, and the wooden roof, &c., were carried off by the Marāthās. The Asar Mubārak, too, is largely of wood, the façade being open, with two wooden pillars supporting the roof, while inside the decoration was of the same material and richly painted. Again, in the Mihtar Mahal—really a splendid gateway to a mosque—and in the Ibrāhīm *rauza* group, we have every detail of the structure in stone covered with the most delicate and exquisitely elaborate carving, the windows filled with tracery, and cornices supported by wonderfully rich brackets. In the *dargāh*, too—as if in defiance of constructional demands—the room, 40 ft. square, is covered by a perfectly level stone roof, supported only by a cove-bracketing from the walls on each side.

Mughal Saracenic Style

The Mughal phase of Indian Saracenic architecture began under Bābar (1526–31), but we have no important work of his left, nor of his son Humāyūn. The first examples of the style belong to the time of Sher Shāh (1539–45), one of the most characteristic of which is the Kila-kohna or Sher Shāh Masjid (1541) at Purāna-Kila, near Delhi, and there are a few other fragments there and at Rohtās. But though the later developments of the style in the rich remains at Delhi, Agra, Fatehpur Sīkri, and some other places have been largely surveyed and illustrated, these earlier structures, though so interesting as the initial forms of the style, have hitherto been neglected for the

more ornamental examples of later date. The first, too, seems to have suffered most under our own rule. During the whole period of the Mughal dynasty, as Mr. Fergusson has well remarked, there is a 'unity in the works and a completeness in their history which makes the study of their art peculiarly fascinating; and some of their buildings will bear comparison, in some respects, with any architectural productions in the world.'

With the emperor Akbar (1556–1605) the Mughal styles made a great advance; he built very largely, and art was living and developing so vigorously during his long reign that it would be difficult to enumerate all the peculiarities of his numerous buildings. As in the Gujarāt and other styles, there is a combination of Hindu and Muhammadan features in his works which were never perfectly blended. Like their predecessors, the Pathāns, the Mughals were a tomb-building race, and those of the latter are even more splendid than those of the former, more artistic in design, and more elaborately decorated. The most splendid of these, and the most renowned building in India, is the far-famed mausoleum, the Tāj Mahal at Agra—the tomb of Mumtāz Mahal, the wife of Shāh Jahān; it is surrounded by a garden, as were almost all Muslim tombs.

In the fine tomb of his father Humāyūn, and at Fatehpur Sīkri, Akbar's buildings are best seen; and as the latter have been well illustrated by Mr. Ed. W. Smith, in four volumes of his *Survey Reports*, it is unnecessary here to enter upon details. Three small pavilions, said to have been built for three of his wives, are gems of picturesque structures, carved and ornamented to the greatest extent without being in the least overdone, and are unsurpassed by anything of the kind elsewhere. Then the great mosque is scarcely matched in elegance and architectural effect; the south gateway is well-known, and from its size and structure excels any similar entrance in India. Akbar's pavilion, the Chālīs Sitūn at Allahābād, was destroyed for materials to repair the fortifications; but his tomb at Sikandra near Agra is a unique structure of the kind and of great merit, the plan probably suggested by some native design.

With Akbar's death the style underwent a change: the Hindu features disappeared entirely, as if outgrown. Jahāngīr made Lahore his principal residence, and Agra and Delhi have little to show belonging to his rule. His great mosque at Lahore is in the Persian style, covered with enamelled tiles; his tomb near by (1630–40) was made a quarry of by the Sikhs from which to build their temple at Amritsar; and the

capital he built at Dacca in Bengal, being mostly of brick-work, in so moist a climate, has gone to utter decay. At Agra, the tomb of I'timād-ud-daula belongs to this reign, and being built entirely of white marble and covered wholly by *pietra dura* mosaic, it is one of the most splendid examples of that class of ornamentation anywhere to be found.

Under Shāh Jahān (1628–58) a remarkable change came over the style: its force and originality gave way to a delicate elegance and refinement of detail. This is well illustrated in the magnificent palaces he built at Agra and Delhi—the latter once the most exquisitely beautiful in the East. Unfortunately, no adequate survey of what remains of these buildings has yet been published. Of the Tāj Mahal (1632–54), fortunately so well preserved, nothing need be added; its extreme delicacy, the richness of its material, and the complexity of its magnificent design have been dwelt on by writers of all countries. So also of the surpassingly pure and elegant Motī Masjid in the Agra Fort, all of white marble: it is among the gems of the style. The Jāmi Masjid at Delhi (1650–66) is a really imposing building, and its position and architecture have been carefully considered so as to produce a pleasing effect and feeling of spacious elegance and well-balanced proportion of parts. In his works Shāh Jahān presents himself as the most magnificent builder of Indian sovereigns.

With the reign of Aurangzeb (1658–1707) the decline of taste set in at once. He was more disposed to insult the religion of the Hindūs than to glorify his reign by splendid monuments; and with all his fanaticism on behalf of Islām, it is said he lowered the *mimbars* of the mosques that the *khatībs* might not stand in a commanding position in his presence. With little true reverence, it was hardly to be expected he should delight in architectural magnificence. Spending much of his time in camps, he built no palace of importance; the tomb of his favourite wife at Aurangābād—vulgarly believed to be like the Tāj at Agra—is commonplace to a degree, and he erected no tomb for himself, though he lived to a great age. The works of his reign seem mostly to have shared in the same decline of style: squared stone and marble gave way to brick or rubble with stucco ornament.

The buildings at Seringapatam and Lucknow are of still later date and are in certain respects imposing, but in detail are often tawdry. Yet architecture is not dead in India. Even in recent years there have been erected tombs and temples of purely native origin and of much elegance in detail,

while retaining the essential elements of structural design; in others again, these elements have parted company, and no amount of elegant ornament can compensate the want of propriety in such structures. Otherwise the imitation of a foreign style is rapidly proving fatal to indigenous art.

Much remains to be done to make us fully acquainted with Indian architecture in its many and interesting phases, more especially in Hindustān or India north of the Vindhya range, and in the extreme South as well as in Hyderābād territory. In the North there has been too little system in the surveys; we want a few monographs on entire styles and districts to enable us to grasp their real merits and characteristics. Surveys of buildings here and there without any links of architectural or historical connexion may serve to illustrate the traveller's route, but contribute little to a full or scientific delineation, the publication of which is a serious desideratum.

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